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ABSTRACT

The report is based on a longitudinal study of a national sample of males in the high school class of 1969. They were followed from the beginning of 10th grade (1966) to one year after high school (1970). The most important determinants of unemployment among young men recently out of high school are family background and intelligence. High unemployment is associated with two groups: those with low intelligence who come from low status families and those with very high intelligence who come from high status families. For full-time workers in entry jobs: (1) the status of their job is determined by background, intelligence, and the availability of high status jobs in the area of employment; (2) wages are a function of the prevailing wage rate for unskilled workers. Full-time workers display a high level of job satisfaction. Variation is associated with job expectations prior to entry and with both monetary and non-monetary job benefits. Type of job (Census classification), satisfaction, and descriptions of job characteristics are all intercorrelated. There is a 12-page glossary. (Author)

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THE TRANSITION FROM HIGH SCHOOL TO WORK:

THE WORK ATTITUDES AND EARLY OCCUPATIONAL EXPERIENCES OF YOUNG MEN

A Special Report from the Youth in Transition Project

JEROME JOHNSTON

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Apprenticeship	Job satisfaction	Statistical samples
Attitude survey	Labor	Students
Attitudes	Males	Surveys
Counseling-vocational interests	Manpower	Unemployment
	Manpower utilization	Unskilled workers
Earnings	Motivation	Vocational guidance
Education (incl. training)	Personnel selection	
Employment	Schools	
Incentives (psychology)	Socioeconomic status	

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CHAPTER 1

SUMMARY AND POLICY IMPLICATIONS

The present report is one of several coming out of the Youth in Transition Project, a longitudinal study of young men in the high school class of 1969. In the fall of 1966, a national sample of tenth-grade boys was interviewed in depth. The group was interviewed again at the end of eleventh grade (1968), the end of twelfth grade (1969), and one year beyond high school (1970). (Chapter 2 presents further detail on research design and methods.) During the high school years they supplied a great deal of information on their family background, intelligence, and school experience, as well as their job attitudes and aspirations. After leaving high school they told us about their successes and failures in the job market.

This report focuses on a number of work-related dimensions in the lives of these young men. The first chapters are based on data from 1566 respondents who participated in all four data collections, only some of whom entered the labor force immediately after high school. Chapter 3 examines attitudes toward work and Chapter 4 describes part-time job experiences during high school. Chapter 5 looks at those who did enter the labor force after high school (N = 539); it first describes their success in the job market and then tries to explain differences in attainment in terms of family background, intelligence, personality, attitudes, experiences, and environment. Finally, Chapter 6 examines the level of job satisfaction experienced by these young workers and discusses some of the reasons for differences in satisfaction. The analyses in this report are based on a relatively small number of cases. However, comparisons with data from the Bureau of Labor Statistics make us confident that the sample is representative of the larger population.

Work Attitudes (Chapter 3). In all four data collections respondents were asked to describe characteristics of their ideal job. A standard set of thirteen items was used, from which two indices were constructed. One of these is Desire for Job Challenge; this measures the need to have a job which provides opportunities to learn new things, utilize present skills, and take responsibility. Throughout high school these job characteristics were held to be very important by those who later attended colleges or universities. Other post-high school groupings, such as workers

and those who entered military service, rated these job characteristics only moderately important at the beginning of tenth grade. But by twelfth grade, they rated them almost as important as their college-bound classmates. For the college-bound, this consistently high desire for job challenge may represent a characteristic which motivates them to do the kind of academic work necessary to gain admission to college. In contrast, the job-bound acquire this disposition during the course of high school. It is as though they acquire it in anticipation of an attitude set needed to survive in the labor force. Support for this hypothesis comes from changes in the Challenge measure for those who were unemployed a year after high school. Interest in Job Challenge climbed rapidly for this group between tenth and eleventh grade, dropped slightly in twelfth grade, then plummeted as they failed in the job market. It is as though the attitude facilitates the transition from high school to a post-high school activity, but it is discarded if the transition fails.

A second measure, Desire for Job Payoff, is an index of the need to have a job that is steady, pays well, and provides opportunities for advancement. It is a job dimension that in general is rated very important by all young men throughout the period between the ages of 15 and 18. However, an interesting trend is noted for those who entered universities and liberal arts colleges. From tenth grade through the first year of college there was a small but steady decline in rated importance. The observed shift is within the range of "very important" to "important" ratings; but if the trend were to continue through the senior year of college, it might signal a growing subculture of young adults who place less stress on security, pay and advancement, while placing more importance on the notion that meaningful, challenging work is what really counts.

Work Experience During the High School Years (Chapter 6). We distinguished between two types of employment: summer jobs and jobs held during school. Summer jobs were quite common, held by 70-80 percent of the young men each summer. The proportion working during the school year increased from 36 percent early in tenth grade to 45 percent later in eleventh grade and 57 percent late in twelfth grade. Most jobs were in the operative, service, or laborer categories.

Patterns of work experience during the high school years were examined to answer two questions: Are there any characteristics of the person which account for why some individuals work and others do not? Secondly, does this work experience have any impact on a young man's ability to secure a good job once he leaves high school? We could not find any personality or background variables to explain

employment during high school. Further, we found that those who did work during school did not secure better jobs after high school. However, amount of part-time work during high school was associated with whether or not an individual secured any employment after leaving school. Those who never worked part-time showed a 19 percent unemployment rate after high school, while those who worked more or less continually during high school later showed an unemployment rate of only five percent. Such experience during high school may establish patterns of work behavior and/or employment contacts which lead to greater success in obtaining employment following school.

Job Attainments After High School (Chapter 5). The major focus of this report is on the occupational attainments of the class of 1969 at a point one year beyond normal graduation, spring-summer of 1970. There are three criteria of interest. For the 539 respondents in the labor force, the criterion is employment/unemployment at the time of the interview. For the 429 respondents who were employed full-time, the outcomes of interest are the wage rate and status (Duncan scale) of their job. A large number of dimensions were examined as possible predictors of these criteria. The analytical framework distinguishes between two types of predictors. On the one hand are factors which might impinge on a young man's preferences for employment. These factors include family background, intelligence, school experiences, and work attitudes. On the other hand are factors in the environment which set limits on these preferences: factors such as the economy of the area, including availability of jobs and the prevailing wage rates.

Unemployment. The most important determinants of unemployment among young men recently out of high school are family background and academic ability. High levels of unemployment (20 percent) are associated with very low scores in academic ability (verbal intelligence) and with being from a family whose socioeconomic level (SEL) is very low. The most plausible explanations for the unemployment in these groups seem to be limitations in ability and work motivation.

Another category with high unemployment (19 percent) is the group of young men from families at the top of the SEL scale. The reasons for unemployment seem quite different for this group, however. Many of them wish they were not in the labor force. Throughout high school they consistently expressed plans for college and aspired to jobs that required additional post-high school education. For some reason they were not able to go to college -- perhaps they could not qualify at the institutions of their choice. To take a job now would be tantamount to admitting to self and parents that

they could not achieve their aspirations. Ambivalent over their future, they make a "non-choice" -- unemployment.

A strong predictor of unemployment is dropping out of high school. Unemployment rates for dropouts averaged 26 percent while for graduates they were only 10 percent. However, this finding is deceptive. Controlling for family background and intelligence, much of the effect of dropping out disappears. Accordingly, we conclude that dropping out probably makes it more difficult to obtain employment; however, the more important causes of unemployment are those pervasive differences in background and ability which precede and help determine the act of dropping out. To put it another way, dropping out may contribute to unemployment, but it is also a conveniently measured symptom of more basic causes of unemployment.

One other predictor of unemployment was months worked during high school. In general, extensive work experience during high school is associated with very low levels of unemployment, while failure to work during high school has high rates of unemployment associated with it. Unfortunately, the measure of months worked during high school does not relate to unemployment in a linear fashion, so we must qualify our findings on its importance. We think that additional research should be done in this area to determine precisely the effects of such experience on adolescents' later labor market success. It is especially important since it represents an area subject to influence by social policy-makers.

Status of Attained Job for Full-Time Workers. Among characteristics of the individual, family background and intelligence are the only statistically significant predictors of job status. The best jobs were secured by those highest in academic ability and those whose families rated high in socioeconomic status (SEL). Multivariate prediction indicated that academic ability (intelligence) is the more important predictor of the two, although SEL continued to account for some unique variance. These findings suggest several

Accounting for Variance in Duncan
Status of Time 4 Job

Unique to SEL	2.4%
Unique to Intelligence	5.4
Overlapping or shared	1.8
Total	9.6%

things. First, a young man's native ability is important in determining early occupational success. The underlying mechanism by which this operates is not clear from the present research, but there are at least two possible paths of influence. Employers desire intelligent workers who can adapt to the demands of a novel job situation. Likewise, ability can influence how an individual seeks a job -- where he looks for employment, and how he presents himself to a potential employer. It is worth noting that our measures of intelligence were not influenced by the type or quality of high school; indeed they were measured back at the start of tenth grade.

Family background showed some influence on job status, probably because it represents a variety of job relevant influences. Higher socioeconomic class families probably know more than lower class families about what are the best jobs and how one should go about securing such jobs. Equally important, higher SEL families probably transmit to their children the desire to seek out the higher status jobs.

Among the contextual variables, urbanization (city size) was a potent predictor. Those who lived in large metropolitan areas were employed in the highest status jobs while the opposite was true for those from rural communities. All three factors were used in a multivariate prediction. The findings are summarized below. Personal factors accounted uniquely for more than twice

Accounting for Variance in Duncan
Status of Time 4 Job

Unique to SEL & GATB	7.9%
Unique to Urbanicity	3.5
Overlapping or shared	1.7
Total	13.1%

the variance unique to urbanicity, but the importance of geography remains impressive.

What strikes us most about these data is not so much the relative importance of each of the three factors, rather it is the degree to which the status of the first job after high school is determined by factors largely outside the individual's control --

his intelligence, his family socioeconomic status, and urbanicity. The implications for policy-makers are somewhat discouraging, for these factors which lie largely outside the individual's control are also difficult or impossible to influence through social policy.

Joint Prediction of Wages. Four measures showed a strong association with a young man's wage rate shortly after high school; these include his family background (SEL), months worked during high school, region of residence, and the prevailing wage rate for unskilled labor in the county where he was employed. All four variables were used in a multivariate prediction. Analyses were performed first for the entire group who were employed full-time, then for the subset who graduated from high school. At first glance the results seem to indicate that the dynamics are different in the two samples. For high school graduates, the only factors

Accounting for Variance in
Wages for Time 4 Job

	Dropouts & Grads N=408	Grads Only N=350
Unique to region & county wages	6.3%	4.7%
Unique to months worked	2.5	*
Unique to SEL	0.3	*
Overlap	0.5	1.7
Total	9.6%	6.4%

*Slight negative relationship

that have a unique effect are strictly contextual: region and county wage rates. In the multivariate analysis, the months worked and SEL measures did not explain uniquely any of the variance in wages. This is evident from the fact that all their explanatory power overlapped that of the region and county wage rate measures. Our interpretation of this overlap is this: the contextual variables can explain as much variance by themselves as a combination which includes other personal factors. Since these economic factors are a given for all young men in the job market, then the personal factors are of little import in determining the wage rate of recent graduates.

When high school dropouts are included in the analysis, a different picture seems to emerge. More total variance in wages can be explained -- 9.6 vs. 6.4 percent -- and other predictors display an ability to explain this variation. Geographical location is still the strongest predictor, but some of the additional variance in wages is explained by the months worked measure. But the months worked measure has a special meaning for dropouts. For most of them the measure assessed months worked in a full-time job after leaving school. Thus, the relationship of the months worked measure indicates only that some dropouts have a wage advantage over graduates because they have more job experience in the regular labor force. In effect, the two multivariate analyses suggest the same conclusion: for entry jobs, wage rates for 18-21 year old males are almost completely determined by the wage rates prevailing in the locale of employment. Part-time work experience in high school is not rewarded by employers. However, the wage advantage of dropouts indicates that experience in the regular labor force does get rewarded. As with the status of attained occupation, we do not see any policy implications flowing from these findings on the factors influencing wage rates, because none of the factors are subject to influence by social policy (at least not in a relatively free economy).

Comparison with the Ohio State Study. One major study parallels the present research; it comes from the National Longitudinal Surveys Project at Ohio State University, sometimes called the Career Thresholds study. One phase of the study is examining the labor market experience of noninstitutional males, aged 14 to 24 (as of the year 1966). The most recent report on this topic appeared in January of 1973, authored by Andrew Kohen, and is entitled, "Determinants of Early Labor Market Success Among Young Men: Race, Ability, Quantity and Quality of Schooling." The analyses were based on a subsample of 665 whites and 142 blacks who met the criteria of being American men 18 to 24 years of age in the civilian population (in 1966) who were out of school and had completed at least eight years of schooling. Thus defined, Kohen's sample represents all those in the present Youth in Transition (YIT) study, but it includes as well many who are not represented in YIT for the present analyses. Specifically, a substantial number in Kohen's sample had completed some post-high school education prior to entering the work force. As a consequence, his sample includes a broader range of educational attainment and those characteristics associated with college attendance: high SEL and intelligence. Another consequence is that his young men were engaged in a broader range of jobs than those in the YIT sample.

Many of Kohen's findings do not differ radically from those in the present study. Other findings will undoubtedly be confirmed by

the YIT data after the next data collection (spring of 1974) when the panel of young men more nearly approximates the characteristics of the Ohio State sample. There is one area, however, where we see a distinct conflict in findings -- one which we doubt will change with additional data. Both studies find that intelligence is an independent direct determinant of early labor market success. YIT finds that in addition family SEL has a unique effect independent of its impact on an individual's intelligence, while Kohen claims that family background makes no unique contribution to occupational attainment after taking into account its contribution to intellectual development and years of schooling. The distinction is potentially an important one for policy-makers. Kohen interprets this overlapping variance (of SEL with educational attainment and intelligence) as support for equalizing educational opportunity at the secondary level and higher. This, he argues, should improve the occupational opportunities for young men who come from disadvantaged backgrounds. This conclusion comes from the following line of reasoning: if family background is important in the prediction of intelligence and years of schooling, but is unimportant in the prediction of job status, then the "socialization function of the family and its ability to finance continued education are far more important than the 'contacts' it may provide as determinants of a young man's early labor market success" (Kohen, p. 139). Inasmuch as family background is a measure of ability to pay for continued education, his argument is sound. But that is not the only line of reasoning permitted by the data. The family also provides what Kohen calls a "socialization function," which we assume includes the notion that parents transmit to their offspring certain motives and values toward work and job attainment which cannot be taught in school. To the extent that these values cause a young man to seek out additional education (regardless of the cost), then family background serves a function that equal educational opportunity may not fulfill. Of course this argument becomes even stronger if the data from the present study are a more accurate representation of reality -- i.e., that family background accounts for variance in job attainment independent of intelligence and years of schooling.

Kohen's strongest predictor of status and wages was years of schooling. The present study cannot support this finding until the next data collection, since the range of educational attainment in our work force sample as of 1970 did not include anything beyond high school. However, we did have a somewhat restricted measure of years of schooling in the form of a dropout/graduate variable. Its influence was moderately strong in a bivariate relationship, but was considerably reduced in the presence of family background and intelligence. A careful consideration of measurement issues suggested that the importance of the dropout/graduate variable would

be even smaller if intelligence and family background could be measured as precisely as the act of dropping out. As a result, we argued that the dropout measure was more accurately seen as a symptom of basic limitations than as itself a cause of differences in occupational attainment. Might not the same thing be true to some extent for a more comprehensive measure of years of schooling? Amount of schooling is rather clearly defined, easily measured, and susceptible to influence by public policy. For all these reasons, it is tempting to assume that years of schooling is itself an important determinant of later outcomes such as job attainment. But our own analyses suggest that other factors more difficult to detect and influence may be at the root of differences in attainment. For this reason we feel that attention must be focused squarely on the issue of the extent to which education is itself a cause of occupational attainment as opposed to a symptom of more basic differences in ability, interest, and motivation -- many of which are not easily manipulated by interventions in the lives of individuals of high school and college age.

Job Satisfaction (Chapter 6). Most of the full-time workers in the present study had been employed less than one year when they were last interviewed. For the most part they displayed a high level of satisfaction with their jobs. The variations in satisfaction were examined and a number of factors were found to be associated with these differences. First of all, some individuals seem predisposed to be satisfied with their jobs. This was inferred from the fact that there is a moderate positive association between job satisfaction one year after high school and satisfaction with school in tenth and eleventh grade. Job satisfaction also relates positively with a measure of general happiness with life that was administered in tenth and eleventh grades. These findings suggest that some respondents, by virtue of personality or generally favorable circumstances in their lives, are predisposed to respond favorably to their jobs, regardless of the working conditions they encounter.

Also of some importance are a young man's occupational aspirations and how they relate to the job attained. Aspired occupation in tenth and eleventh grade was recoded to the same Duncan status scale used to code the job attained one year after high school. Difference scores were computed, subtracting status of attained job from status of aspired occupation. It was found that the greater the discrepancy, the lower the satisfaction. An example may help make this finding more concrete. Young men who had aspired throughout high school to high status jobs (frequently requiring college training), but who found themselves in operative, laborer, and service jobs, were frequently less satisfied than the average. Apparently, before entering the labor force a young man develops

an image of what is an appropriate occupational niche for him to occupy. This image influences the response he makes to the job he enters soon after high school: the better the "fit" between this image and actual attainment, the higher the satisfaction.

The association of the aforementioned factors with satisfaction was moderate. There still remained plenty of room for characteristics of the job to account for variations in satisfaction. We did not have objective measures of job characteristics, but we did have respondents' ratings of a number of dimensions of the job. These included payoff, challenge, autonomy, meaningfulness, and supervisory characteristics. These dimensions can be classified into extrinsic and intrinsic aspects of the job. Payoff is extrinsic and refers to aspects such as pay, steadiness, and opportunities for advancement. Challenge, autonomy, and meaningfulness are intrinsic and refer to aspects such as meaningfulness of the work, opportunities to learn new things and use present skills, and opportunities to exercise some judgment in how the job is carried out. Both extrinsic and intrinsic dimensions seem important to job satisfaction. If a young man is satisfied, he is most likely engaged in a job that he rates high in extrinsic and intrinsic rewards. Amount of supervisor interaction also seems to be important; high satisfaction is associated with supervisors interacting frequently on the way in which a job is to be performed. Interestingly, how warm and friendly the supervisor is perceived to be seems not as important as the simple activities of interacting and talking about how a job is to be done.

We were worried about the subjectiveness of these ratings of job dimensions and suspected that some of the association derives from the ratings being surrogate measures of satisfaction. However, other evidence indicates that they are not entirely subjective. Categorization of jobs by their census type (professional, sales, laborer, etc.) is a crude way of differentiating jobs by the type of tasks involved in the job. When job type is used to predict satisfaction in a one-way analysis of variance, the eta value is .30, indicating that there are differences in satisfaction tied to the nature of the work. When the ratings of job dimension are predicted to from type of job, the eta values range from .28 to .40. The particular differences among job types that underlie the association are generally quite in line with our expectations. Managerial jobs are among the highest in rated satisfaction, meaningfulness, challenge, autonomy, and payoff, while laborer jobs average at the bottom of each of these scales. There probably remains much "subjectivity" and "bias" in individuals' ratings of their job characteristics; however, the analyses do show that there is more than mere subjectivity in such ratings, and that job characteristics do make some difference in the satisfaction a young man derives from his work experience.

CHAPTER 2

THE YOUTH IN TRANSITION PROJECT

The data for this report come from a large study of adolescents, the Youth in Transition (YIT) project, conducted by the Survey Research Center, University of Michigan. YIT is a longitudinal study which has followed a sample of young men from the start of tenth grade (fall, 1966) to the time when most of them had been out of high school for about a year (summer, 1970).[1] It includes among its most basic purposes the study of attitudes, plans, and behaviors, particularly those relating to educational and occupational aspirations and achievements. A number of publications have already been written based on data from this study. They cover such topics as:

The impact of family background and intelligence on tenth-grade boys

The causes and effects of dropping out of high school

Correlates of a decision to enlist or not enlist in military service after high school

The impact of the high school experience on young men

The use and abuse of drugs

A complete description of the purposes and procedures of the project may be found elsewhere (Bachman, et al., 1967); however, some of the highlights of the design will be mentioned here.

STUDY DESIGN

Youth in Transition began data collection in the fall of 1966, using a national cross-section of about 2,200 tenth-grade boys

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[1] Primary support for the overall project has come from the Office of Education. Additional support for some phases of the research has been provided by the Department of Labor, Department of Defense, and the W. T. Grant Foundation.

located in 87 public high schools. There were four data collections from this panel. These are summarized in Table 2-1. The initial measurement (Time 1) consisted of individual interviews and group-administered tests and questionnaires conducted in the schools. About four hours were required for each boy to complete the various instruments. A second measurement (Time 2), conducted in neutral sites away from the schools, took place in spring of 1968 as most of the boys were ending eleventh grade. This shift away from the schools to neutral interviewing sites was done on the assumption that more school dropouts would participate if they did not have to return to the site of their earlier failure. At Time 2 both the interviews and questionnaires were administered on a one-to-one basis.

The data collection in spring of 1969 (Time 3) occurred when most of the respondents were nearing high school graduation. Two questionnaires were administered in small groups of less than ten by trained Survey Research Center interviewers. One questionnaire contained a standard set of repeated measures; the other contained a new set of questions on plans and attitudes toward military service. Each instrument took approximately one hour to administer. Since these group-administrations occurred outside of school and "after hours," each respondent was paid five dollars to cover his time and transportation costs. Participation in the third data collection was secured from 1799 boys, representing 81 percent of those who began the study in fall of 1966, or 79 percent of the original sample.

The most recent data collection (Time 4) occurred one year later and consisted of individual interviews with respondents. There were two interview booklets and three self-administered questionnaires. Average administration time was over three hours. Respondents were paid ten dollars this time, taking account of the fact that some of them had to take off up to five hours from paying jobs to come to a neutral site to participate in this interview. More than any other data collection, extensive (and costly) efforts were made to secure participation from as many panel members as possible. Former respondents who had moved were contacted if they lived within 50 miles of a Survey Research Center interviewer. Those in military service stationed at bases in the United States were contacted even though they were beyond the Center's usual 50-mile limit. Those stationed overseas were sent questionnaires and special self-administered forms of the interviews. As a result, complete interviews were obtained from 1620 young men; this represents 71 percent of the original sample. Overall, this represents a very high rate of retention. In survey research, typical non-response figures for a national sample of households range from 15 to 25 percent for a single non-repeat interview.

TABLE 2-1

Data Collections from Young Men

	TIME 1	TIME 2	TIME 3	TIME 4
Date	Fall, 1966 (tenth grade)	Spring, 1968 (eleventh grade)	Spring, 1969 (twelfth grade)	Summer, 1970
Procedure	Individual interviews; group-administered tests and questionnaires	Individual interviews and questionnaires; $2 payment	Group-administered questionnaires; $5 payment	Individual interviews and questionnaires; $10 payment
Location	Schools	"Neutral Site"	"Neutral Site"	"Neutral Sites"
Number of Respondents*	2213	1886	1799	1620**
% of Original Sample (N=2277)	97.2%	82.8%	79.0%	71.1%
% of Time 1 Panel (N=2213)	100%	85.2%	81.3%	73.2%

* Probability sample located in 87 schools.

**The number who responded at all four points in time is 1566. This group is the basis for all analyses in this report which are based on the complete sample.

The Youth in Transition study has a rate of 29 percent at the end of a four-year period.

Only a small portion of panel losses from this study was due to refusal to participate. More frequently, losses were due to the inability to locate some of the respondents who had moved, or an inability to collect data when respondents moved to locations out of range of the Survey Research Center's field staff. It is clear from preliminary analyses that losses occurred more frequently among those panel members who dropped out of school; thus it must be noted that the sample at Time 3 and Time 4 tend to underrepresent high school dropouts. Accordingly, there is some underrepresentation of those respondents with characteristics associated with dropping out: low socioeconomic level and low intelligence scores. Non-black minority groups also were lost from follow-up interviews at a higher rate than either whites or blacks. This has inevitably introduced some bias into the sample, and descriptions of the size of these particular subgroups in American society represent underestimates. However, these losses do not appear to have altered the composition of the subgroup from which they come; e.g., those dropouts who remained in the study during all four years are not very different from those who did not participate after the initial data collection. This was demonstrated in the monograph on dropouts (Bachman, et al., 1971). In this study, three major analysis groups were distinguished: high school dropouts, high school graduates with no further education, and graduates who continued their education after high school. It was possible to classify both respondents and non-respondents into the appropriate analysis group, on the basis of interviewer reports on non-respondents. Using data from the initial interview, participants were compared with non-participants. The authors concluded that:

> In general, the initial scores for intelligence, socioeconomic level, etc., obtained at the start of tenth grade are about the same for those dropouts who participated at Time 4 as for those non-participants who were identified as having dropped out. This conclusion for [dropouts] also applies to [high school graduates with no further education and graduates who continued their education after high school]. In other words ... within each analysis category there is little difference in background and ability between those who continued their participation through Time 4 and those who did not. (Bachman, et al., 1971, p. 19)

This finding is important for the present report. Many of the analyses are based on a subset of young men who provided data in all

four data collections. This number is only 1566. When we use this group to estimate the size of certain subgroups in society (e.g., percent in college, military service, or the labor force), the figures may depart somewhat from the population distributions. However, when we describe the feelings or behaviors of these subgroups in our sample, we feel confident that the associated point estimates are an accurate reflection of how the population subgroup feels or behaves. Additional evidence for this can be found in Chapter 5, Table 5-3. This table shows the distribution of 429 full-time workers in the YIT sample into census job categories. The percentage distribution is shown to match almost perfectly the distribution from the Bureau of Labor Statistics based on 2.4 million youth.

SOME CHARACTERISTICS OF THE YOUTH IN TRANSITION PANEL

What are the young men in the Youth in Transition (YIT) panel like? Where are they from and what were they doing in spring of 1970? The answers to these and similar questions provide a necessary backdrop for interpreting the findings of this study. On the one hand they demonstrate the representativeness of the YIT sample; on the other, they provide a context in which to interpret their work plans and behaviors.

Respondents are scattered throughout the 88 Primary Sampling Units (PSU's) that comprise the Survey Research Center's sampling frame for national studies. As the figure below shows, there are PSU's located in every region of the country. The PSU's range in composition from farm districts and small towns to large metropolitan areas, so a range of urbanicity is represented also. Racially, the sample approximates the national average for blacks; approximately 11 percent are black. Another 1.7 percent are from other minority groups including Spanish, Mexican, Puerto-Rican, Cuban and Portuguese. In age they vary (one year after high school) from 17 to 21, with a mean of approximately 18-1/2.

Upon leaving high school these young men selected themselves into one of three major environments: post-high school education, work, or military service. For convenience, the panel is described as though all respondents had successfully completed high school. In fact, some eight percent dropped out of high school prior to graduation and another three percent remained in high school after June of 1969 to complete work on a diploma. Table 2-2 captures all of these distinctions by showing both educational attainment and major activity as of spring of 1970. Over one-half of the sample went on to some form of further schooling. Another third joined the labor force and 11 percent were on active duty in military service.

TABLE 2-2

Educational Attainment and Primary Activity of
YIT Sample (Class of 1969) One Year After Graduation (Spring, 1970)

Educational Attainment	Employed Full-Time	Employed Part-Time or Hours Unknown	Unemployed	Continuing Education	Military Service	Total
High School Dropout	65 48.1 16.9	2 1.5 5.7	23 17.0 36.3	21° 15.6 2.5	24 17.8 14.3	135°°° 100% 8.6%
High School Graduate - No Further Education	372 60.9 85.1	24 3.9 68.6	44 7.2 69.7	27° 4.4 3.1	144 23.6 85.7	611 100% 38.7%
Some College	--	9 1.0 25.7	--	811 99.0 94.4	--	820 100% 52.7%
	437 27.9 100%	35 2.2 100%	67 4.3 100%	859 54.9 100%	168 10.7 100%	1566°° 100% 100%

° Continuing high school
°° The number who responded at all four points in time.
°°° This figure underestimates the number of dropouts; see text for explanation.

Survey Research Center's Random Sample
of the United States

Note: Each point indicates one sample unit.

SUBGROUPS USED IN THIS REPORT

There are a number of groupings of respondents that are used in this report. One is the entire sample which responded at all four points in time. This is composed of 1366 respondents. The other three groupings focus on those who entered the labor force after leaving high school. These include all those who were in the labor force, those employed full-time, and those employed full-time for whom hourly wages could be computed. The complete sample forms the basis for the material presented in Chapters 3 and 4; the three labor force groupings are introduced in Chapters 5 and 6.

CHAPTER 3

THE DEVELOPMENT OF WORK ATTITUDES

In each of the four data collections we asked the young men in our sample about their ideal job. Their responses allow us to quantify the perceived importance of several dimensions of work. Using a standardized set of questions, we are able to trace these conceptions as the sample matured during the high school years.

RATINGS OF IDEAL JOB CHARACTERISTICS

Table 3-1 presents thirteen items concerned with "...the kind of job you would like to have," and shows means and standard deviations for each of the four data collections. The items consistently rated most important have to do with (a) steady employment (no chance of being laid off); (b) opportunities to learn new skills, utilize present skills and abilities, and "get ahead"; (c) good pay; and (d) nice friendly people to work with. All of these areas show a good deal of stability across time in their average ratings of importance -- i.e., they were rated quite important at the start of tenth grade, and they held just about the same high ratings throughout high school and the year following graduation.

Several other items were rated much lower initially and even showed substantial drops in ratings (one-third to one-half standard deviation) throughout the four years of the study. Two of these items were stated in rather negative terms: "a job where I don't have to take a lot of responsibility" and "a job that doesn't make me learn a lot of new things." There was also a drop in the importance attached to "a job that my friends think a lot of -- that has class." Two other items with consistently low ratings were "a job where I don't have to work too hard" and "a clean job, where I don't get dirty."

The pattern seems consistently to favor jobs that provide challenge and responsibility, opportunities to use existing skills and acquire new ones. The idea that one should *avoid* responsibilities and new learning -- the notion of a soft and undemanding job -- is not rated important at the start of tenth grade and becomes even less important as the respondents pass through high school. It may be worth noting that the overall changes in

TABLE 3-1

Rating of Job Characteristics for Ideal Job
(Complete Sample)

The next questions are about the kind of job you would like to have. Different people want different things from a job. Some of the things that might be important are listed below. Please read each of the things on the list, then check the box that tells how important this thing would be to you.

Don't just check *Very Important* for everything. Try to think what things really matter to you, and what things really aren't that important.

How important is this for you? (4) Very important; (3) Pretty important; (2) A little important; (1) Not important

	Time 1 10th Gr	Time 2 11th Gr	Time 3 12th Gr	Time 4 12+1 year
1. A job where there's no one to boss me on the work.	2.59 *.97*	2.47 *.97*	2.51 *.92*	2.65 *.91*
2. A job that is steady, no chance of being laid off.	3.55 *.71*	3.59 *.62*	3.52 *.72*	3.56 *.71*
3. A job where I can learn new things, learn new skills	3.49 *.69*	3.47 *.66*	3.43 *.73*	3.45 *.71*
4. A job where I don't have to work too hard	2.37 *.97*	2.19 *.87*	2.13 *.92*	2.22 *.88*
5. A clean job, where I don't get dirty	2.33 *1.04*	2.19 *.98*	2.17 *.97*	2.22 *.97*
6. A job with good chances for getting ahead	3.64 *.59*	3.59 *.62*	3.56 *.66*	3.53 *.66*
7. A job where I don't have to take a lot of responsibility	2.23 *.93*	1.99 *.93*	1.95 *.94*	1.86 *.87*
8. A job that leaves me a lot of free time to do what I want to do	2.77 *.91*	2.60 *.89*	2.60 *.96*	2.69 *.96*
9. A job where the pay is good	3.57 *.68*	3.51 *.68*	3.64 *.64*	3.64 *.67*
10. A job that my friends think a lot of -- has class	2.70 *.89*	2.36 *.88*	2.30 *.92*	2.27 *.87*
11. A job that uses my skill and abilities -- lets me do the things I can do best.	3.56 *.66*	3.54 *.64*	3.50 *.68*	3.47 *.66*
12. A job that has nice friendly people to work with	3.38 *.70*	3.36 *.70*	3.35 *.68*	3.37 *.69*
13. A job that doesn't make me learn a lot of new things.	1.99 *.97*	1.81 *.89*	1.71 *.94*	1.59 *.87*

Note: N=1566, the total number of respondents providing data all four years of the study. Cell entries are means (bold-face type) and standard deviations (italic). Missing data on any mean averages 23.5 cases.

attitudes shown in Table 3-1 do not seem to be the result of leaving high school and moving into the "real world." Instead, those changes which we observe occur gradually throughout the high school years, and there is relatively little change in the year following graduation.

TWO INDEXES OF JOB ATTITUDES: CHALLENGE AND PAYOFF

The items shown in Table 3-1 are obviously interrelated. An examination of the intercorrelations among the items led us to distinguish three general categories of statements about ideal jobs: (1) those items concerned with extrinsic rewards, (2) those describing aspects of challenge and intrinsic satisfaction, and (3) those concerned with avoiding such things as hard work and responsibilities. The intercorrelations among the items are shown in Figure 3-1. Within each grouping of items there is a set of three items (indicated by the larger circles) which group together both empirically and conceptually. A balanced index of "Desire for Job Challenge" was constructed by giving a positive weight to items 3, 6, and 11, and a negative weight to items 4, 7, and 13 (see Figure 3-2). Thus a person high in Desire for Job Challenge attaches great importance to a job that permits him to learn new things, use his skills, and get ahead. Someone low in Desire for Job Challenge shows a good deal of concern that he not have to work too hard, take responsibility, or learn new things.

An index of extrinsic rewards, "Desire for Job Payoff," was formed by taking a mean of items 2, 9, and 6. Someone hoping for a job with high Payoff wants good pay, a steady job, and good chances for getting ahead.

Correlates of Desire for Job Challenge. The Desire for Job Challenge index shows both some interesting differences among groups, and also some important changes across time. Perhaps the most useful introduction to both differences and changes can be found in Figure 3-3, which shows mean scores across all four points in time for seven groups: those who a year after high school were in:

1 Colleges and universities,

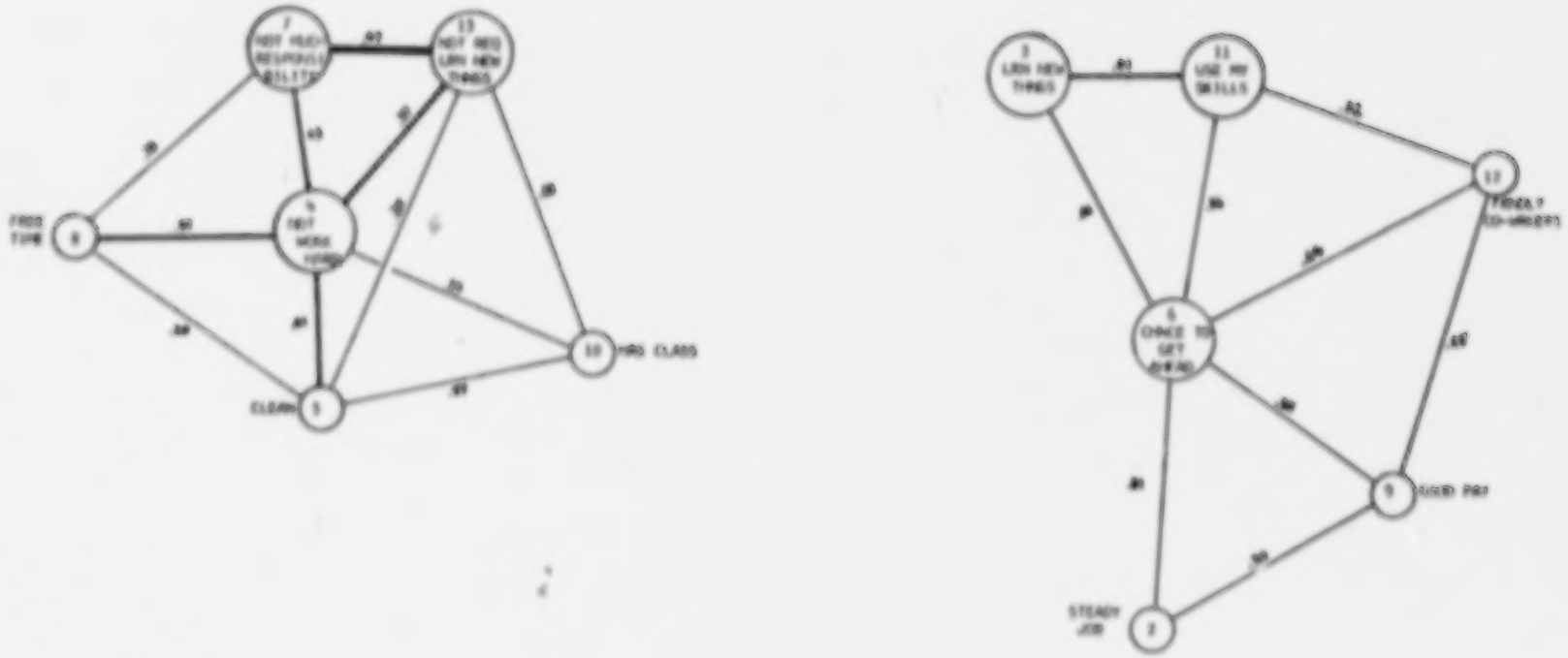
2 Junior and community colleges,

3 Technical or vocational training,

4 Military service,

FIGURE 3-1

Intercorrelations Among Items Describing Ideal Job Characteristics
(Time 3 Measures)



How important to this (for the job you'd like to have)?

☐ 1. Very important ☐ 2. Pretty important ☐ 3. A little important ☐ 4. Not important

FIGURE 3-2

Distribution of Scores for Desire for Job Challenge and Desire for Job Payoff, Time 3 Measures

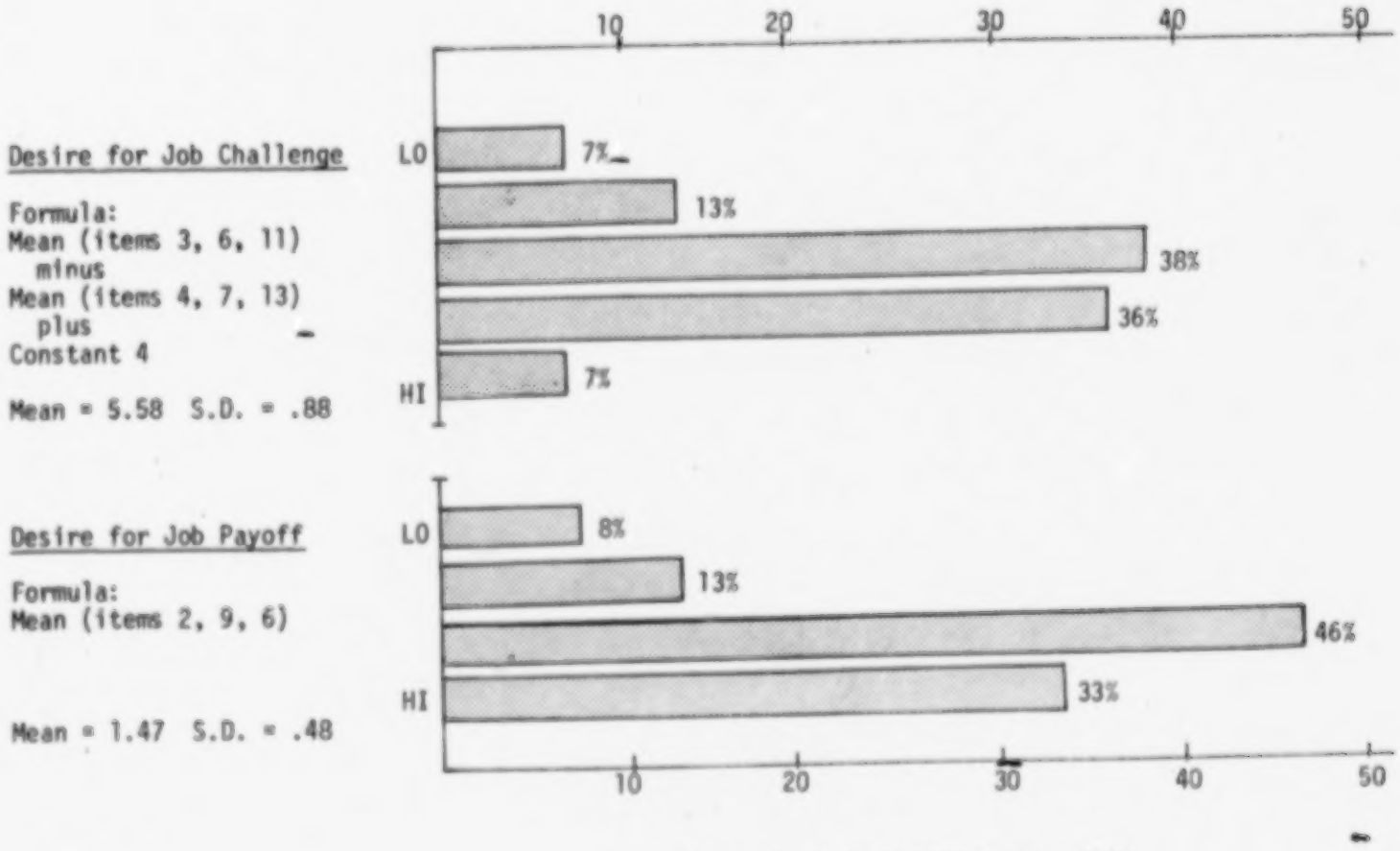
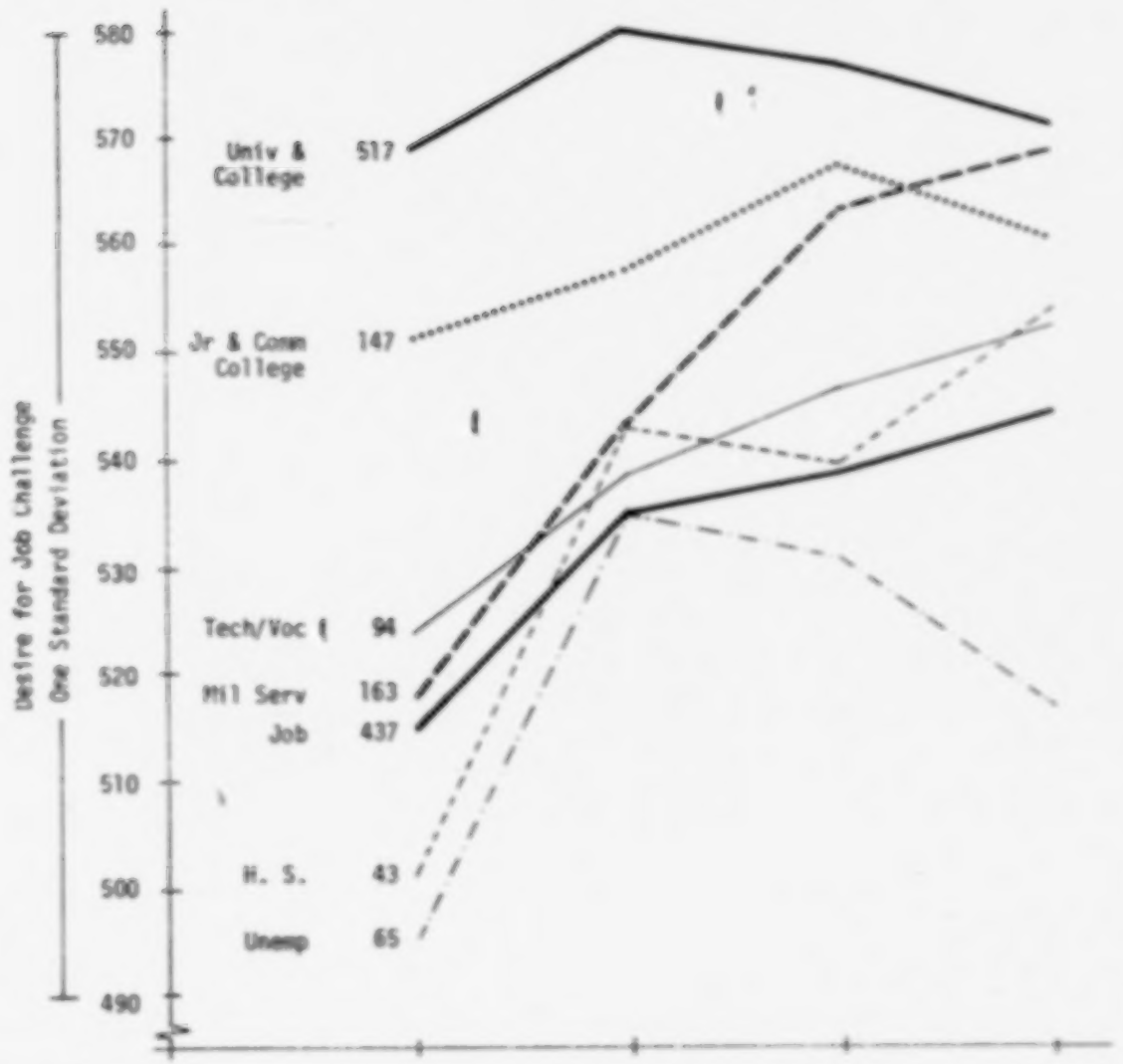


FIGURE 3-3

Desire for Job Challenge Related To
Environmental Status at Time 4



5500.3

5 Civilian jobs,

6 High school (did not graduate "on time"),

7 Unemployed (and not still in school).

An overview of Figure 3-3 shows that the differences among groups at the start of the study were a good deal larger than those at the last data collection. This is particularly interesting since the subgroups were defined on the basis of their environment (school, job, etc.) at the end of the study rather than the beginning. Turning to the specific groups identified in the figure, we can list the following observations:

1. Those respondents who entered colleges and universities showed consistently high Desire for Job Challenge throughout high school and during the year following high school.

2. Those who entered junior and community colleges showed a similar but slightly lower overall pattern.

3. Those who entered the military service began tenth grade with relatively low Desire for Job Challenge, and then showed a large and steady increase throughout high school.

4. Those who entered civilian jobs were very similar to those who went on to technical or vocational training after high school; both started out rather low and then showed a moderate increase throughout high school.

5. The two remaining groups, those still in high school and those unemployed at the time the study ended, showed similar patterns through the first three data collections -- they began very low, showed a sharp increase at the second data collection, and remained at essentially the same level for the third data collection. At the end of the study the two groups diverged sharply; those who continued their (prolonged) high school studies showed an increase, while those who were unemployed showed a drop.

To extend our understanding of the Challenge measure, we correlated it with a number of other measures in the Youth in Transition project. The most important correlations are summarized in Table 3-2. Data in Part A of the table indicate that Desire for Job Challenge is positively related to family socioeconomic level and to tests of intelligence and ability. For intelligence, the correlation starts high ($r = .33$) and remains fairly high. This suggests that the more intelligent feel a greater need for jobs that they can describe as challenging -- jobs in which they can

TABLE 3-2

Desire for Job Challenge Related to Selected Measures
(Product-Moment Correlations)

	Desire for Job Challenge as Measured at....			
	Time 1 10th Gr	Time 2 11th Gr	Time 3 12th Gr	Time 4 12 + 1 Year
Part A: FAMILY BACKGROUND AND INTELLIGENCE (Measured once at the beginning of 10th grade. N=1566.)				
SOCIOECONOMIC LEVEL	.28	.21	.17	.16
GATB-J TEST OF INTELLIGENCE	.34	.28	.26	.27
Part B: MOTIVES AND VALUES (Measured at different points in time. Time 1 measure correlated with Time 1 index of Desire for Job Challenge, Time 2 measure correlated with Time 2 index of Desire for Job Challenge, etc. * = not measured at this point in time. N=1566.)				
NEED FOR SELF-DEVELOPMENT	.36	.43	.47	.49
NEED FOR SELF-UTILIZATION	.32	.36	.40	.42
POSITIVE SCHOOL ATTITUDES	.31	.36	.33	*
ACADEMIC ACHIEVEMENT VALUE	.33	*	.23	*
DUNCAN STATUS OF ASPIRED OCCUPATION	.26	*	.13	.15

9511

NOTE: With N=1566, an r = .05 is significant at the .05 level.
For the NIT clustered sample, r = .08 is significant.

learn new things and utilize their skills. The correlation with family socioeconomic level is fairly strong at the start of tenth grade (r = .28), but declines considerably by the end of high school and the year after. This is quite consistent with the findings summarized in Figure 3-3, which show a convergence among the college and non-college groups. It appears that self-actualization needs are transmitted partly through one's family, with those from high socioeconomic levels having the highest needs for job challenge. But during adolescence, association with peers and other unknown factors impact upon those in lower socioeconomic levels to raise their needs for challenge.

Part B of Table 3-2 shows how Desire for Job Challenge is related to several measures of motives and values. First, a brief description of the measures themselves will be helpful. (A more detailed reference can be found in the Glossary.)

Need for Self-Development. The need to better oneself; to grow and develop.

Need for Self-Utilization. The need to use one's skills and abilities, to keep in practice.

Positive School Attitudes. Attitude towards the intrinsic value of education. "I believe an education will help me to be a mature adult." "Education has a high value because knowing a lot is important to me."

Academic Achievement Value. An index of how good an individual thinks it is to study constantly, work hard to achieve academic honors, and strive to get the top grade-point average.

Duncan Status of Aspired Occupation. A status recode of the occupation which a respondent hopes one day to enter. The recode is a score from 1-99, reflecting average status, education, and earnings associated with the job.

Early in high school, the need for a challenging job is correlated about equally with four measures: general needs for self-development and self-utilization, positive feelings about the value and worth of education and getting good grades. During high school the pattern of correlations shifts. The relationship with general needs for self-development and self-utilization increases. The relationship with positive feelings about education remains the same; but the correlation with academic achievement value declines. It seems that with maturation, the general needs for self-development and self-utilization become more closely linked to what one

hopes to get out of his job and less closely tied to the value placed on outstanding academic performance. There appears to be some anticipatory socialization occurring as these youth approach the time to leave school and enter the labor market.

The correlation of Challenge with status of aspired occupation is moderately strong in early tenth grade, $r = .26$. Most of this is due to the fact that those who would later attend college had the highest scores on Challenge, and these same individuals aspired to the highest status jobs. By the end of twelfth grade the correlation drops to $r = .13$, reflecting the fact that there is a general rise in the Desire for Job Challenge on the part of the non-college-bound individuals.

Correlates of Desire for Job Payoff. In contrast to Challenge, the Payoff index shows very little fluctuation over the high school years. The figures are presented below. Reported needs for Payoff are very high among 15-year-olds and continue to be high for 18-year-olds.

	Tenth Grade	Eleventh Grade	Twelfth Grade	Twelfth + 1 Grade
Mean	3.56	3.55	3.53	3.55
S.D.	.49	.50	.51	.51

The subgroups shown in Figure 3-3 were examined for shifts across time in Desire for Job Payoff. Most of the groups showed no orderly pattern across the four points in time; the few shifts were of a statistically trivial sort. An exception was noted for the university and liberal arts students. They ranked Payoff needs the highest of any group at the time they began tenth grade, but throughout high school their rating of Payoff declined steadily until by one year after high school it had dropped a full 40 percent of a standard deviation, from 3.77 in tenth grade to 3.43 four years later. Both of these figures are within the "important" to "very important" range, but the trend is worth noting. In recent years concern has been expressed that college graduates seem to be showing an indifferent attitude toward the Protestant Work ethic, or seem to be interested in a career that fulfills rather than pays. The trend in the Payoff measure for the university and liberal arts college students is traced only through freshman year. The Desire for Payoff could decline much further in subsequent years

TABLE 3-3

Desire for Job Payoff Related to Selected Measures
(Product-Moment Correlations)

	Desire for Job Payoff as Measured at...			
	Time 1 10th Gr	Time 2 11th Gr	Time 3 12th Gr	Time 4 12 + 1 Year
Part A: FAMILY BACKGROUND AND INTELLIGENCE (Measured once at the beginning of 10th grade. N=1566.)				
SOCIOECONOMIC LEVEL	.06	-.04	-.05	-.09
GATB-J TEST OF INTELLIGENCE	.09	.04	.01	.05
Part B: MOTIVES AND VALUES (Measured at different points in time. Time 1 measure correlated with Time 1 index of Desire for Job Payoff, Time 2 measure correlated with Time 2 index of Desire for Job Payoff, etc. * = not measured at this point in time. N=1566.)				
NEED FOR SELF-DEVELOPMENT	.19	.22	.23	.27
NEED FOR SELF-UTILIZATION	.21	.23	.24	.28
POSITIVE SCHOOL ATTITUDES	.20	.20	.22	*
ACADEMIC ACHIEVEMENT VALUE	.28	*	.25	*
DUNCAN STATUS OF ASPIRED OCCUPATION	.09	*	.00	*

5553

NOTE: With N=1566, an r = .05 is significant at the .05 level.
For the YIT clustered sample, r = .08 is significant.

of higher education. Indeed it could drop low enough to provide ample support for the above contention. An additional Youth in Transition data collection planned for the spring of 1974 should provide the necessary data to see whether such is the case.

We also examined the association of Job Payoff with the validating measures discussed earlier for Challenge. The correlations are all much smaller than for Challenge. (See Table 3-3.) No doubt this is due to the smaller variance in the Payoff measure -- 28 percent as large as Challenge. This stems from the fact that high Desire for Job Payoff seems to be such a universal need. Socioeconomic level (described in Chapter 5) shows a positive relationship in tenth grade, but by Time 4 it is negative. This is due to the fact that the importance ratings by college-bound youth (who typically come from high socioeconomic backgrounds) were highest of all groups in tenth grade and lowest four years later.

SUMMARY

Two measures have been introduced in this chapter as measures of how a young man of high school age views the world of work. One of these, Desire for Job Challenge, measures the need to have a job that is challenging in the sense of providing opportunities to learn new things, utilize present skills, and take responsibility. Throughout high school these job characteristics are rated very important by those who later attend colleges and universities. Other post-high school groupings, such as workers and those who enter military service, rate these job characteristics only moderately important at the beginning of tenth grade. But by twelfth grade, they rate them almost as important as their college-bound classmates. Perhaps this orientation to work is one of the traits which help the college-bound do the work necessary to gain admission to college.

For the job-bound, affiliation with the college-bound, maturation, and the approaching inevitability of entering the labor force could lead to the adoption of a new set of work values which they think is appropriate to the world of work. Support for this hypothesis comes from the pattern of the Challenge measure for those who were unemployed a year after high school. Their interest in Job Challenge climbed rapidly between tenth and eleventh grade, dropped slightly in twelfth grade, then plummeted as they failed in the job market. It is as though the attitude facilitates the transition from high school to a post-high school activity, but it is discarded if the transition fails.

The Challenge measure describes the nature of the work one hopes to enjoy; the Payoff measure describes the rewards one hopes for. Desire for Job Payoff is an index of the need to have a job that is steady, that pays well, and provides opportunities for advancement. It is generally held by all subgroups to be important. An exception is noted for those who enter universities and liberal arts colleges. From tenth to twelfth grade and the year after there is a steady decline in rated importance. The observed shift is within the range of "very important" to "important" ratings; but if the trend continued through the senior year of college, this might indeed signal a growing subculture of young adults who place less stress on security, pay and advancement, while holding tightly to the notion that meaningful, challenging work is what counts.

CHAPTER 6

JOB EXPERIENCE DURING THE HIGH SCHOOL YEARS

The transition from school to the world of work proceeds at varying rates among youth. Some make the transition at the end of their schooling with little or no prior exposure to jobs. For others the first full-time job is an extension of various full- and part-time jobs held during junior and senior high school. In this chapter we describe briefly the nature and extent of work experiences in tenth, eleventh, and twelfth grades. Then we examine the patterning of employment during these years, asking two questions: (1) is the pattern orderly or random; and (2) are there personal traits and characteristics which correlate with different amounts of employment during high school? In later chapters we ask whether high school work experiences has any impact on post-high school job attainment and job attitudes.

Early in this research we decided to distinguish between two types of high school employment -- summer jobs and during-school jobs. The former were held by the majority of high school students: 80 percent in the summer after ninth grade, 70 percent after tenth grade, and 60 percent after eleventh grade. With a phenomenon so universal as working during the summer, it did not seem worthwhile to explore patterns in this type of employment. Indeed, in the next chapter we report that being employed in the summer shows no relationship to any of the post-high school job criteria such as employment, quality of job, or hourly wages. Eliminating summer employment leaves the job experiences of those who worked during the school year. It seems plausible that this experience would be more formative. The "after-school job" requires sacrificing time that could be spent in school activities such as sports and clubs and in more general recreation time with friends. Thus, there should be a degree of commitment to the job that mediates a young man's involvement in his work.

As explained in Chapter 2, the portion of the YIT sample being used for these analyses contains more bias when used for descriptive purposes. Thus, for example, the distributions into occupational classifications of those working part-time in tenth grade may not match perfectly a census distribution. Nonetheless, the relational analyses reported here should approximate fairly closely those relationships holding in the more complete national sample as it

TABLE A-1

Work Participation, Tenth-Twelfth Grade by Educational Attainment

WORKING

Percentages of Row N

Educational Attainment	N	Early Tenth Grade			Late Eleventh Grade			Late Twelfth Grade		
		Total	F-T	P-T	Total	F-T	P-T	Total	F-T	P-T
Dropout	135	30 (82)	2 (5)	28 (46)	58 (79)	36 (44)	22 (24)	79 (107)	49 (66)	29 (41)
H.S. Only	608	36 (218)	1 (6)	35 (334)	50 (310)	8 (45)	42 (266)	58 (357)	13 (79)	45 (276)
College	625	31 (187)	1 (7)	30 (180)	39 (232)	2 (13)	37 (221)	58 (410)	6 (39)	46 (324)
TOTAL	1368	36% (487)	1% (26)	35% (548)	45% (701)	6% (98)	39% (612)	57% (894)	11% (340)	44% (714)

F-T = Full Time, 35 or more hours per week
P-T = Part Time, 1-34 hours per week

was constituted in 1966. (Those who would like the census distributions should see Perella, 1967.)

Three subgroups are frequently compared and contrasted in this chapter. These are based on dividing the sample according to educational attainment.

> DROPOUT: Those who interrupted their high school education for more than a few weeks. As of 1970, approximately 20 percent of this group had returned to school and received a diploma.
>
> HIGH SCHOOL ONLY: Those who graduated from high school in 1969, but did not continue their education as of mid-1970.
>
> COLLEGE: High school graduates who continued their formal education. This group includes those who attended any formal institution of advanced training, ranging from a university to a technical/vocational school.

EARLY TENTH GRADE (TIME 1)

Thirty-six percent of the sample held a job at the beginning of tenth grade (Time 1). As the first columns of Table 4-1 show, this proportion was very similar among the three subgroups of interest. Those holding jobs had been working at their particular job for an average of six months (median score). For the most part, jobs were obtained through personal contacts (parents, relatives, and friends) and only rarely through formal channels such as employment agencies or school counseling.

On the average, these boys worked 12 hours per week. Both age and educational attainment showed some relationship to the number of hours worked. Dropouts and those 16 years and older worked longer hours than the average.

The particular jobs clustered in four census categories (Table 4-2): laborers (31 percent), operative/service workers (29 percent), clerical/sales (19 percent), and farm laborers (11 percent). Those who later dropped out of school had the highest proportion employed in operative/service jobs (busboy, waiter, usher, hospital attendant, etc.), while those who attended college had the highest proportion engaged in sales work. Probably a combination of employee skills and job requirements is responsible for these small differences in distribution for clerical/sales type jobs.

TABLE 4-2

Work Experience at the Beginning of Tenth Grade

				for those who are working							
						Type of Job					
Category[1]	N	Freq/Pct Working		Mean pay/hr	Mean hrs/wk	cler/ sales	oper/ srvc	labor	farm	other	total
Dropout	135	(51)	38%	$1.49	16	2%	42	34	16	6	100
H.S. Only	606	(219)	36%	1.23	13	17	30	35	12	7	100
College	825	(287)	35%	1.37	10	25	29	30	10	7	100
All Rs	1566	(557)	36%[2]	1.32[3]	12	19	29	31	11	10	100

SSBN,4,17

[1] Based on later educational attainment
[2] Ten percent of those working held more than one job.
[3] Differences in wages N.S., $p<.05$.

TABLE 4-3

Work Experience at the End of Eleventh Grade

			for those who are working							
					Type of Job					
Category[1]	N	Freq/Pct Working[2]	Mean pay/hr	Mean hrs/wk	cler/ sales	oper/ srvc	labor	farm	other	total
Dropout	135	(78) 58%	$1.58	34	4	49	26	4	17[3]	100
H.S. Only	606	(300) 50%	1.46	20	11	47	21	13	9	100
College	825	(323) 39%	1.57	14	17	42	24	8	9	100
All Rs	1566	(703) 45%	1.53[4]	19	13	44	23	9	11	100

5504

1 Based on later educational attainment
2 Frequency working full-time: dropout (44), H.S. Only (41), College (12).
3 12% skilled workers
4 Differences in wages N.S., $p<.05$.

The rate of pay for these tenth graders in the fall of 1966 averaged $1.32 per hour. There was considerable variation around this figure, and a number of predictors were examined to find a correlate. However, neither intelligence, age, nor length of time on the job showed any consistent relationship with wages. These data suggest that there are few systematic differences in job attainment that can be associated with differences in personality or ability -- at least among those beginning tenth grade.

END OF ELEVENTH GRADE (TIME 2)

Forty-five percent of the respondents were working at the end of eleventh grade -- 39 percent part-time, and six percent full-time. Those working full-time were not always dropouts; apparently a small group of young men are able to both attend school and be on a job for 35 or more hours per week.

The particular jobs which these boys held distributed somewhat differently from early tenth grade (see Table 4-3). Many more boys were engaged in operative/service type jobs than in any other category. Very few dropouts were in sales or farm work; on the other hand, dropouts had the largest proportion in skilled jobs (painter, mechanic, etc.). Undoubtedly, these latter jobs were available to dropouts primarily because of their full-time (and day time) availability. Again, the college group had the largest proportion engaged in sales work.

The average pay was $1.53 per hour, higher by 21¢ than the average earnings reported in early tenth grade. About 7¢ could be attributed to a rise in the Consumer Price Index over the same period, leaving 14¢ to be explained by the fact that these boys were now older and/or more skilled and so were qualifying for higher paying jobs. The differences in earnings among educational attainment groups are shown in Table 4-4. There are no statistically significant differences among the three groups until the full-time workers are isolated. Then, it is clear that the dropouts earn considerably more than either of the other two groups. Much of the wage superiority is due to the skilled workers among the dropouts. It appears that for some dropouts a motive for leaving school before graduation is the attractiveness of job opportunities.

Among the part-time workers we searched to discover why the college group might earn more on the average (even though the difference in earnings was not statistically trustworthy). Average wages were computed within each of the major job categories: clerical/sales, craftsman, operative, and laborer. Within the last three job classifications the pay rates were virtually identical for

TABLE 4-4

Educational Attainment and Wages for Those Working
At the End of Eleventh Grade

Educational Attainment	Total*	Working Pt-Time	Working Full-Time
Dropout	$1.58 (78)	$1.44 (30)	$1.69 (44)
H.S. Only	1.46 (300)	1.49 (257)	1.31 (41)
College	1.57 (323)	1.58 (303)	1.26 (12)
Total	$1.53 (703)	$1.53 (590)	$1.48 (97)
F-test of differences in means $p<.05$	N.S.	N.S.	Signif.

5504

TABLE 4-5

Educational Attainment and Wages for Those Working
At the End of Twelfth Grade

Educational Attainment	Total**	Working Pt-Time**	Working Full-Time**
Dropout	$2.24 (92)	$1.97 (25)	$2.36 (62)
H.S. Only	1.83 (292)	1.80 (213)	1.93 (74)
College	1.76 (317)	1.73 (280)	1.91 (36)
Total	$1.85 (701)	$1.77 (518)	$2.00 (172)
F-test of differences in means $p<.05$	Signif.	N.S.	Signif.

* Where frequencies for part-time and full-time do not add to the total, hours-worked data was missing.

** Wages were unavailable for 193 working respondents.

the three educational attainment groups. Most of the "action" was associated with clerical/sales jobs. Only one of our dropouts held a clerical/sales job; of the remaining clerical/sales workers, one-third were high-school-only, earning $1.36, and two-thirds were college-bound averaging $1.62 per hour. Additional analyses showed these differences to be associated with a combination of socioeconomic status and intelligence. This suggests that both family contacts and job-relevant skills could have been factors in securing higher wages for the college-bound.

END OF TWELFTH GRADE (TIME 3)

At the end of twelfth grade over one-half of the respondents were working (57 percent). As would be expected, the dropouts had the highest proportion working (79 percent) and about two-thirds of these held full-time jobs. Somewhat surprisingly, the other two educational attainment groups each had an appreciable number working full-time, 13 percent for high-school-only and 4 percent for college-bound. Funding limitations at Time 3 limited the data gathering effort, and there is no information available on the types of jobs held, but there is some information on hours and wages. Looking at the proportion of time spent on the job, the average was 17.5 hours per week for those working part-time -- only slightly higher than part-time workers at the end of eleventh grade. There were no differences among the three educational attainment groups.

The wages received rose considerably in the 12-month period, with the average rate being $1.85 per hour (Table 4-5). Among those working part-time, college-bound and high-school-only groups received almost identical rates of pay, but the dropouts were earning $1.97, almost one-half a standard deviation more. A similar pattern was found for those working full-time. Dropouts earned the highest, $2.36 per hour, while all others had an average of $1.92. The reason for this differential is not apparent from any of our data. Our best hypothesis is that the dropouts received a higher rate of pay because they had been on the job for a longer period of time and were seen by employers as more permanent employees.

PATTERNS OF JOB EXPERIENCE DURING THE HIGH SCHOOL YEARS

We have reported increasing numbers of young men holding jobs as they move through the high school years. But we have not yet indicated the extent to which those who were employed at one point in time were also among the employed at another point in time. Do those individuals who hold jobs early in high school tend to remain

employed in those (or other) jobs throughout high school? Or do jobs during high school pattern in a more random fashion, with little or no relationship between employment at one point in time across another?

We can begin to answer these questions by looking at the summary "tree" presented in Figure 4-1. This figure displays the eight possible patterns of employment at the first three data collections, and shows the numbers and proportions of respondents who fit each pattern. In addition, the "L_p" figure provides an index of the likelihood of being employed at the next point in time given present and past patterns of employment. For any branch, the index is derived by dividing the number employed at the next point in time by the total number in the branch.

Looking first at the Time 2 job experience, it can be seen that having a job at Time 1 is a good predictor of having a job at Time 2. The L_p for those who had jobs at Time 1 is 60 percent, compared to 37 percent for those who did not have jobs then.

The job experience patterns for Time 3 are captured in the eight groupings at the right-hand end of the tree. We find that about 23 percent of the young men (Group 1) were not employed during any of the three data collections. Another 16 percent of the respondents (Group 2) were not employed at Times 1 or 2, but did hold a job at Time 3. This group is somewhat smaller than Group 1, indicating that if a young man has had little or no part-time work experience by the end of his junior year (Time 2), he is relatively unlikely to gain such experience during his last year of high school. His likelihood of employment (L_p) is 39 percent.

The next two groups in Figure 4-1 (Groups 3 and 4) show a common pattern of non-employment at Time 1 and employment at Time 2. For this group the likelihood of employment is much higher, 68 percent. Among those who were employed at Time 1 but not at Time 2 (Groups 5 and 6), the odds of having a job at Time 3 were fifty-fifty. Among those who were employed at both Time 1 and Time 2 (Groups 7 and 8), more than three quarters were also employed at Time 3 (L_p = 80 percent).

What can we conclude from these data? First of all, we can note that employment during the later high school years (i.e., Times 2 and 3) is somewhat predictable from earlier part-time work experience. Employment at Time 2 is 23 percentage points more likely for those who had a job at Time 1.

Employment at Time 3 is even more predictable from earlier employment; this is summarized in Table 4-6. The right-hand column

FIGURE 4-1

Work Experience During High School Years

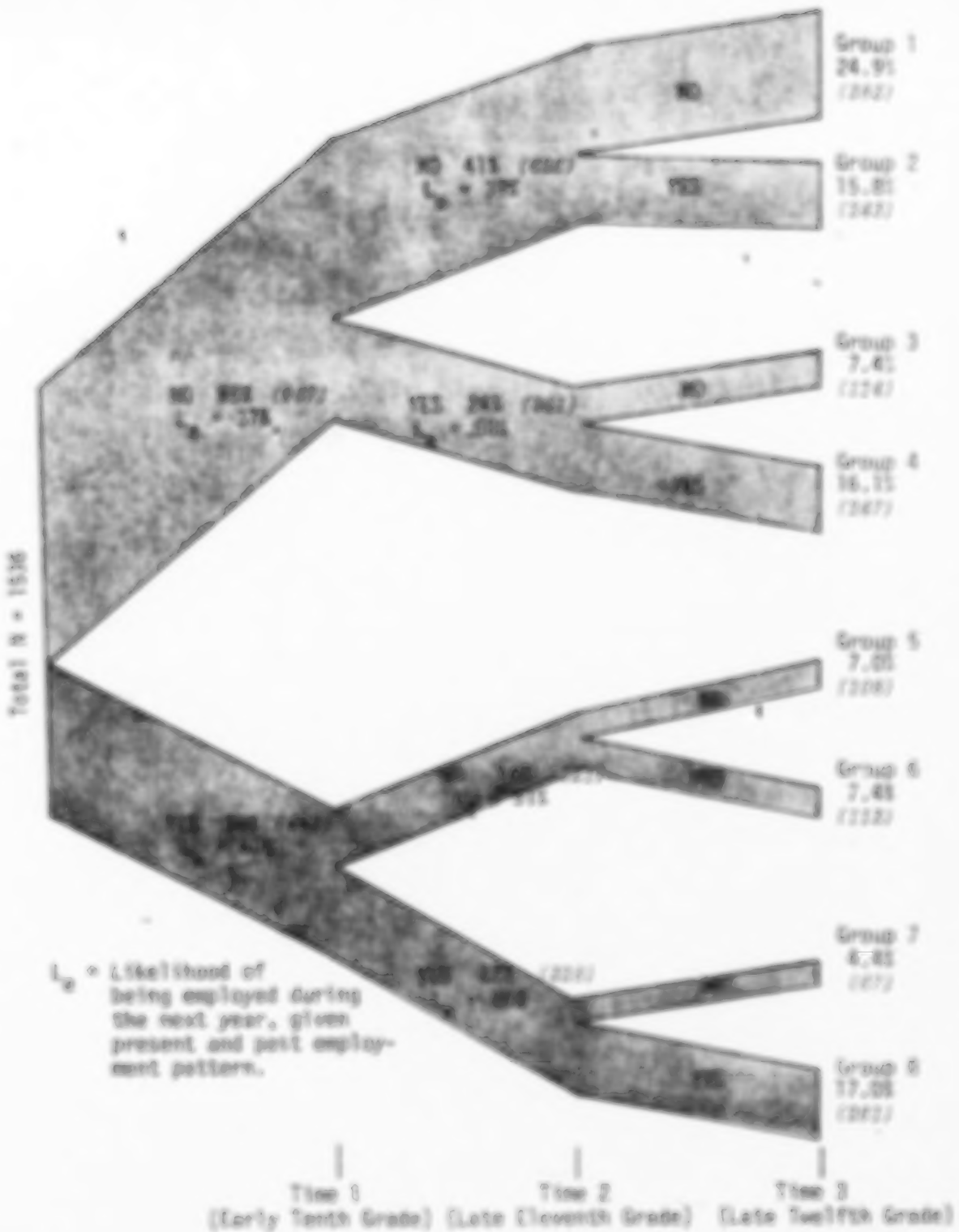


TABLE 6-6

Employment at Time 3 (in percentages)
as a Function of Employment at Times 1 and 2

		Employed at Time 2?		TOTALS
		NO	YES	
Employed at Time 1?	YES	51.1% (N=221)	79.6% (N=328)	68.1% (N=549)
	NO	38.0% (N=426)	68.4% (N=361)	49.6% (N=987)
TOTALS		42.0% (N=647)	73.7% (N=689)	56.3% (N=1536)

of the table shows that Time 3 employment rates were 68 percent among those who held jobs at Time 1, and about 50 percent for those who did not. This difference of 18 percentage points is not as large as the 23 point spread noted above, but that is to be expected given the longer interval between Times 1 and 3 (30 months). When we predict Time 3 employment from experience at Time 2, only 12 months earlier, the relationship is much stronger as shown in the bottom row of Table 4-6. Time 3 employment rates were about 74 percent among those who held jobs at Time 2, compared with 42 percent among those who did not -- a difference of 32 percentage points. Even greater accuracy of prediction is achieved if both Time 1 and Time 2 information are utilized. Note that 80 percent of those working at both Time 1 and 2 were employed at Time 3, while only 39 percent of those who never worked were employed. It would appear that prior experience increases the likelihood of further employment; but, as we will see later, this simply means that some young men hold the same job through several years during high school.

POSSIBLE CAUSES OF JOB EXPERIENCE PATTERNS

We established above that there is a systematic patterning of part-time job experiences during high school -- those employed at one point in time are more likely to be employed at the next point in time. Now let us consider some of the possible causes. At this point our efforts must become much more tentative and speculative. Unfortunately, our interest in a detailed understanding of part-time employment patterns during high school developed after the early data collections; thus we did not include some questionnaire and interview items which, in retrospect, would have made our present task much simpler. Nevertheless, some data are available which can at least serve as the starting point for some useful hypotheses about the causes of early job experience patterns.

One quite plausible hypothesis is simply that there are certain "types" of young men who are attracted to work during high school. Employment during the early high school years is thus an indicator of such personality characteristics, and is for that reason predictive of later employment. Just as some kinds of individuals consistently attain high academic grades from one semester to another, so it may be that certain kinds of individuals seek and successfully attain employment throughout the high school years.

We cannot test this hypothesis definitively, but we can take a look at some relevant data. If we suppose that the personality characteristics associated with working during high school include certain abilities and/or attitudes toward work, then we can see

whether our measures of such dimensions show differences among those with different patterns of employment during the high school years. An examination of several measures of intelligence, vocabulary and reading skills showed no such systematic differences, and the same negative conclusion was reached when we examined Desire for Job Challenge, Desire for Job Payoff, and a number of personality measures. Differences in ability and personality may nonetheless exist, but our examination did not bring any to light.[1]

A second hypothesis, somewhat related to the first, proposes that having a job during the early years of high school (e.g., Time 1 and also Time 2) produces some changes in young men which make it more likely that they will continue to be employed. One might then look for changes in attitudes toward work and the like. Once again, an examination of our work attitude measures failed to uncover any such changes attributable to differential work experiences during high school.

But perhaps there is a much simpler explanation for the patterns of consistency in employment during high school. Let us consider as a third hypothesis the proposition that some jobs in high school last a long while, and thus some of those who are employed at one point in time will be employed in the <u>same</u> job at a later point in time. Thus, for example, it is altogether possible that the higher probability of employment at Time 2 for those employed at Time 1 is simply due to the fact that some held on to the same jobs through Time 2. We did not ask our respondents who held jobs at Time 2 whether they had held the same job at Time 1, but we did ask them

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[1] For those familiar with the Youth in Transition study, we may note that relationships were examined between work experience and the following indexes: Flexibility, Self-Esteem, Seriousness of Delinquency, Classroom Grades in ninth grade, Gates Reading Test, GATB-J Test of Intelligence, Ammons Quick Test of Intelligence, Socioeconomic Level, Ever Held Back, and Desire for Job Challenge and Payoff. The last two indexes are described in Chapter 3 of this report. Most of the other indexes are described in Chapter 6 or the Glossary. Detailed descriptions appear in Volume II (Bachman, 1970) and Volume III (Bachman, et al., 1971). Two procedures were used; in one, an analysis of variance was performed on each of the above measures, using the eight-category job experience variable as the classification variable. In the second procedure, each of the above measures was correlated with a measure of the total number of months worked between eighth and twelfth grades. In both instances no statistically significant relationships were discovered.

how long they had been working at their job. Thus it became a fairly simple matter to distinguish between those who had been working less than 18 months (the average interval between Time 1 and Time 2 data collections), and those who had been working longer. We assumed that those in the latter category were working in the same job at both Times 1 and 2.

Of the 328 individuals identified as having arrived at both Time 1 and Time 2, 181 held the same job at both times, and 147 held new jobs. Thus in more than half of the cases the continuity in working from Time 1 to Time 2 occurred simply because the respondent held onto his job for a fairly long time. Now suppose that we omit those 181 individuals from our analysis for a moment. Of the remaining 368 who held jobs at Time 1 (368 minus the 181), only 147 or 39.9 percent held (new) jobs at Time 2. This is quite close to the Time 2 employment rate for those who were not employed at Time 1 — 361 out of 987, or 36.6 percent. In other words, we find that many of those with jobs at Time 1 apparently held onto their jobs through Time 2; for the others, however, the likelihood of having a job at Time 2 was just about the same as for those unemployed at Time 1.

Could the same sort of thing explain why those working at Time 2 were more likely to be working also at Time 3? Was it simply because many held the same jobs? Unfortunately, we do not have direct data, since the Time 3 paper-and-pencil questionnaire did not include a question about length of employment in current job (funding considerations precluded the use of personal interviews at Time 3). It does seem likely, however, that as many as half of those who were employed at Time 2 held onto their same jobs at Time 3. Feeding this assumption into Figure 6-1 would bring the i_{ij} for Groups 3 and 4, and Groups 7 and 8 very close to 50 percent. That would explain much of the patterning of employment experiences shown in Figure 6-1, but not all of it. One of the problems resulting in the fact that among all those unemployed at Time 2, those who had been employed at Time 1 showed a 51 percent likelihood of having a job at Time 3, whereas the corresponding figure for those who had not been employed at either Time 1 or Time 2 is 39 percent. This may indicate that some of those in Group 1 were never "in the market" for work during their high school years. In other words, the patterning of employment experiences during high school can be shown to be largely random except for two types of young men: (1) those never in the market for employment, and (2) those regularly employed in the same job.

Our conclusions about employment experiences during high school might be summarized in this way. There are some youth who are predisposed by virtue of background, need, or circumstances to secure

employment early in high school; and many of these individuals secure a job and remain in that same job during the high school years. Another group of young men are really never in the market for a job; if the opportunity presented itself, they would not be interested in being employed. For the remainder, employment is a rather chance affair, determined by circumstances unknown to the authors. The employment experience of this large group seems to have little if any effect on later attitudes toward work.

In the next chapter we will explore one other possibility; that work experience during high school has an impact on the post-high school job attainments of those young men who enter the labor force. But again we will see that what appears to be a moderate relationship between amount of experience and attainment of employment after high school really is more parsimoniously explained by other factors.

CHAPTER 3

JOB ATTAINMENTS AFTER HIGH SCHOOL

What factors determine a young man's success in securing a job after high school? Why do some youth secure higher status, higher paying jobs than others? Does part-time job experience or school performance count for anything or do employers treat most young workers alike? These questions describe the central theme of this chapter: a search for the correlates of job attainment in the first year after high school. The chapter is divided into three parts. The first presents the conceptual framework which guided the search for correlates of job attainment and the statistical methods used in the analysis. The second describes the job attainments of the Youth in Transition cohort and presents three criteria of labor market success. The third part details the results of the search for factors influencing attainment.

I. CONCEPTUAL FRAMEWORK AND ANALYSIS METHODS

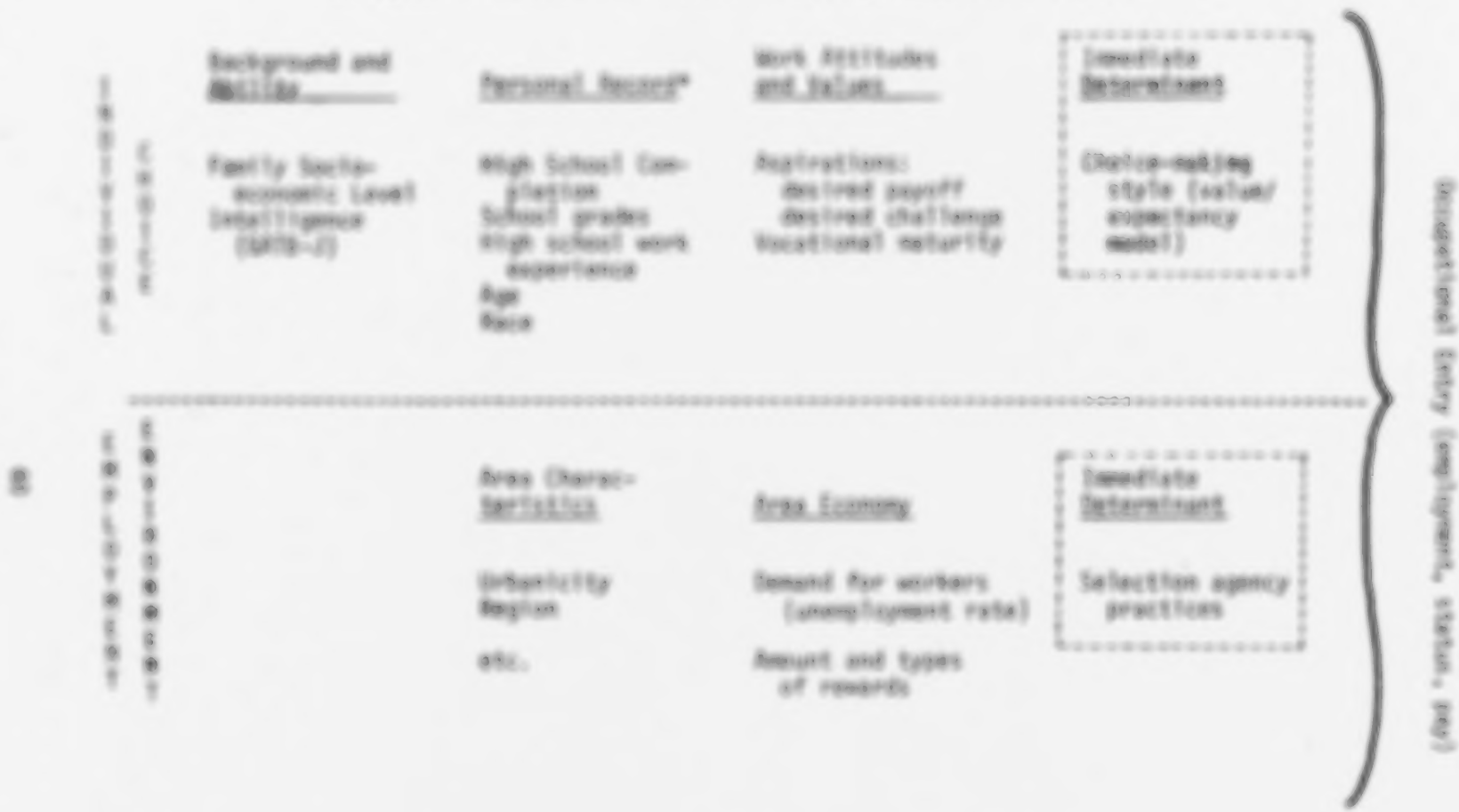
CONCEPTUAL FRAMEWORK

Job entry is a complex phenomenon. Entry at any point in time represents the interplay of individual choice factors and employer selection practices, all of which are influenced by the developmental history of a geographic area including its economic health, and its supply of physical and human resources. Investigation of such a complex phenomenon requires a conceptual framework which specifies the many possible determinants and the interrelationships which might be anticipated from theory. An article by Blau, Gustad, Jessor, Parnes and Wilcock (1956) presents such a framework. It is the end-product of an inter-disciplinary conference convened for the purpose of aiding and stimulating further research on the topic of occupational entry. Figure 3-1 shows a diagram of this framework adapted to the Youth in Transition study.

The figure is divided into two parts. The top includes factors primarily associated with individual choice; the bottom shows factors in the employment environment. Neither represents an exhaustive listing, but they do include some of the important factors which Blau et al. urged measuring.

FIGURE 5-1

Conceptual Framework for Factors Affecting Occupational Entry



* Personal Record: credentials presented to employer.

At the right-hand end is the outcome measure, occupational entry. In the present study this refers to the occupation which an individual held at the time of data collection in mid-1970, corresponding to a point in time approximately one year beyond graduation for most of the respondents, and somewhat further for those who dropped out of high school. For many, the job they held at this time was not the first job obtained after leaving high school, but it is soon enough after school exit that we can assume that the job is representative of the type of work a recent graduate could secure.

There are two boxes directly to the left of job entry: these are the so-called immediate determinants of entry. For the individual this is the choice-making mechanism which he uses in approaching the job market. The most reasonable model to the authors would be a value/expectancy model which posits that an individual has a hierarchy of job preferences (values) and a hierarchy of expectancies about what jobs he could be accepted for, and that these two hierarchies interact to determine the jobs for which the individual presents himself. The immediate determinant in the environment is the particular set of practices to which the employer adheres in selecting among the people who present themselves for employment. Neither of these two immediate determinants were measured in this study, but they are included in the diagram because they are essential to the entry process and are the mechanisms on which the measured variables impinge to determine a particular job outcome.

To the left of each of these immediate determinant boxes are the variables of interest in this research -- those which will be examined for strength of association with job attainment. Characteristics of the individual and his background probably play three roles. First, they impact on the types of jobs that the individual thinks about. The son of a laborer attending a school comprised largely of lower class students may be less likely to aspire to jobs in the professional category because they are less visible to him -- they are not part of his subculture. Second, such past accomplishments as school grades and success in part-time work experience, plus such personality characteristics as job-related values and attitudes, influence the ordering of the jobs for which the individual thinks he can qualify or get accepted. Finally, individual characteristics are the credentials to which the employer reacts. For his part, the employer uses standards or decision rules which are influenced by a number of different factors, including the general supply of workers and the prevailing wage rates in the area where the place of work is located. There are a host of other factors which might vary by locale, such as preferences for non-white workers and availability of workers with particular needed skills.

ANALYTIC METHODS

The analytic approach arising from this framework was a two-step process. The first involved an examination of the shape and strength of the bivariate relationship between each potential explanatory variable and the various job attainment measures. When a bivariate relationship was promising, the explanatory variable was included in a multivariate analysis which combined a number of explanatory variables to estimate the total amount of variance which could be explained as well as the amounts which could be attributed to unique and overlapping components.

In most cases, the bivariate relationships were examined using a one-way analysis of variance, with a bracketed version of the explanatory variable used as a classificatory variable. This method permitted an examination of the shape of the relationship across the bracketed range of the explanatory variable. This was particularly helpful since many of the relationships in this study turned out to be curvilinear. The summary measure that is presented is eta. Eta can be thought of as a universal measure of relationship similar to a product-moment correlation, except that it takes into account both linear and curvilinear relationships between two variables. It is very similar to a product-moment correlation, and is identical in absolute value to r when the relationship is linear. However, it takes on larger values when there is some curvilinearity present. Unlike r, eta takes on only positive values from 0.0 to 1.0. When it seems helpful, both r and eta are presented so the reader can assess the amount of curvilinearity present.

We have refrained from presenting an F-ratio or other significance test in our tables because, quite frankly, we do not think there is any single "correct" solution to the significance test issue in our analyses. First of all, most significance tests (and the computer programs which generate them) assume simple random sampling. But our sample was drawn using a clustered design (as discussed in Chapter 2 and Appendix C). This means that our level of accuracy is somewhat lower than would be the case with a simple random sample involving the same number of cases; indeed, applying the (somewhat conservative) design effect of 2.3 projected for our sample means that a subgroup of 400 cases has the "accuracy equivalent" of 173 cases. The table below shows the eta values necessary to reach significance with and without taking account of design effects. A brief review of the figures will confirm that when we apply this design effect in assessing the statistical significance of a finding, we require a fairly strong effect to reach significance, and thus run a greater risk of overlooking a true relationship because it fails to meet the criterion.

TABLE 5-1

Etas Corresponding to Significant F-ratios, $p < .05$

Number of Categories in Explanatory Variable	Analysis Type I: Unemployment (applies to all those in the labor force) N = 539		Analysis Type II: Status, Pay (applies only to those employed full-time) N = 400	
	Simple Random Sample	YIT Clustered Sample	Simple Random Sample	YIT Clustered Sample
2	.08	.13	.10	.15
3	.11	.16	.12	.19
4	.12	.18	.14	.21
5	.13	.20	.15	.23
6	.14	.22	.17	.25
7	.15	.23	.18	.27

NOTE: Using a design effect of 2.3, a simple random sample of 539 is reduced to an effective sample of 234. A simple random sample of 400 is reduced to 173.

Another reason why we do not emphasize significance tests is that we have not followed a hypothesis-testing strategy in the conduct of our analyses. Rather, we have taken an exploratory approach, at least to the degree that we have been willing to examine various patterns of relationships rather than specifying in advance that we are only interested in linear relationships. A further glance at the table above will indicate that when one looks at a larger number of different predictor categories (in order to better discover non-linear relationships) one pays a price in terms of stronger relationships required for statistical significance.

For these reasons we have chosen not to fix a particular criterion for statistical significance. Instead, we have provided the table above, and other tables and discussions in the appendices, so that those readers who wish to translate into one or another rule for significance testing may do so. We should add, of course, that we have tried very hard to avoid the twin risks of interpreting

a chance relationship as real, and interpreting a true relationship as chance. In so doing we have made use of the tables ourselves, and in addition have placed a good deal of importance on whether the patterns of relationships seem relatively simple (parsimonious) and plausible.

Multivariate Analysis. When several explanatory variables warrant being treated multivariately, they are entered into a Multiple Classification Analysis. This is a form of multiple regression uniquely suited to the type of explanatory variables used in this study. It is described in some detail later in this chapter.

II. OPERATIONALIZING ATTAINMENT

UNEMPLOYMENT

A total of 539 respondents (about 34 percent of the YIT sample) were defined as being primarily in the labor force in the spring of 1970. For most respondents this date corresponded to one year after graduation from high school. Figure 5-2 shows the employment data for this group. Thirteen percent were unemployed, five percent were employed part-time (1-34 hours), and 81 percent were employed full time (more than 34 hours per week). One of the three dependent variables in this chapter is percent unemployment. For this measure part-time and full-time work were considered alike as indicating employment. Unemployment was operationalized as being unemployed and not primarily a student or on active duty in military service at the time of the interview in the spring of 1970. Those who were temporarily laid off were considered to be employed. In the YIT sample there was a 12.4 percent unemployment rate.

EMPLOYMENT PATTERNS

The remaining two dependent variables concern those who were employed full-time. Table 5-2 shows the occupations held by this group. The largest number were employed as operatives in factories, transportation, or some other industry. The next largest number were in craftsman jobs, followed in turn by laborers and clerical/sales workers. The smallest number were in the farming category or in the professional/managerial category. Those in the professional category were engaged almost entirely in jobs such as surveyor, testing technician, or manager of a small restaurant, gas station, or store. Table 5-3 compares this distribution with that of the Bureau of Labor Statistic's sample of two million males. While the YIT sample is slightly different in age range and

FIGURE 5-2

Sample Sizes for Three Attainment Measures

* N=1566. Includes only those who responded at all four data collection times.

education, the distribution into occupational categories approximates almost perfectly the distribution in the B.L.S. sample.

Status. For analytic purposes, it is useful to convert the job attained into a code which has an underlying ordinal scale denoting a range of quality, status, or prestige. Initially, three different recodes were used, the Duncan, Siegel, and Folk. Only the Duncan survived an early phase of testing for utility and parsimony. All three recodes are discussed and compared in Appendix B.

The Duncan recode is a well-established scale of socioeconomic status of occupation based primarily on average income and education of those working in the occupation in 1950 (Reiss, 1961). The scale takes on values from 01 to 99, with the higher scores implying higher socioeconomic status for the job. Table 5-2 provides the mean Duncan score for occupations in eight census categories. Examples of specific occupations at various levels of the Duncan scale can be found in Appendix B, Table B-1.

Empirically, the Duncan measure shows expected relationships with the predictors and it spreads out individuals in an understandable way. Conceptually, it ranks jobs in a way that parallels what we think young men would deem a scale of desirability. For example, consider the following three occupations and their status ratings: janitor (09), auto mechanic (19), and service station manager (33). It seems reasonable that this represents an ordering which corresponds closely to the preference hierarchy of an 18-year-old youth. Further support for this comes from an examination of employed occupations of those who entered the full-time labor market after high school. At the end of senior year they indicated their job desires. The mean score on the Duncan codings of these preferences was 44.3. The mean status for jobs attained one year after high school was 25.0. Clearly, the higher status jobs are more preferred by these youth.

Rate of Pay. Still another way to scale occupations in a manner which suggests a continuum of desirability is the monetary benefit associated with the job; in particular, the hourly rate of pay. In this study, data were collected on weekly rate of pay and average number of hours worked. These were used to calculate an hourly rate of pay. (The formula can be found in the glossary under "average hourly wages.") Income distributions are shown in Table 5-2; the average income across all jobs for full-time workers was $2.83 an hour with a standard deviation of 82 cents.

III. CORRELATES OF ATTAINMENT

This section displays the results of a search for correlates of success in the job market. For each independent variable of

TABLE 5-2

Average Earnings and Duncan Status for
8 Census Categories of Occupation

Census Category	Percent/ Frequency	Average* Hourly Earnings	Average Weekly Earnings	Mean Duncan Status
White Collar				
1 Prof/Tech/ Mgr/Prop	5 (22)	$2.69	$124	54.4
2 Cler/Sales	15 (62)	2.53	113	38.6
Blue Collar				
3 Craftsmen	23 (97)	2.76	123	33.5
4 Oper (factory)	20 (86)	2.99	130	16.2
5 Oper (other)	14 (61)	2.50	119	19.6
6 Laborers	14 (59)	2.59	119	8.9
7 Service workers	6 (27)	2.12	92	12.3
8 Farmers	3 (14)	---	86	12.6
9 Occ. Unknown	-- (2)			
Total employed Full-Time	100 (429)			
Column Mean		$2.65	$119	25.0
Column S.D.		.82	40	15.0
Total N with non-missing data		409	421	427

3182 3341

* Average hourly rates were calculated using weekly incomes and hours worked per week. The formula can be found in the glossary. Farmers and self-employed were eliminated from these calculations.

TABLE 9-3

Comparison of Y.I.T. Sample with B.L.S. Sample

	Y.I.T. Spring, 1970 Males Employed Full-Time Not Primarily a Student Class of 1969, Age Range 18-20	B.L.S. October 1969 Employed Males, 16-21, Not Enrolled in School*
Total	429	2,400,000
Percent	100.0	100.0
White Collar Prof., Tech., Cler., Sales	19.8%	18.6%
Blue Collar Crafts, Oper., Lab.	70.2	69.8
Service Workers	6.3	6.5
Farm Workers	3.3	5.2
Occup. Unknown	.6	---

* Anne M. Young, "Employment of School-Age Youth." In Monthly Labor Review, Sept. 1970, Vol. 93, #9.

interest, three analyses were run, using the three different dependent variables of unemployment, status of job attained, and hourly rate of pay. The question in each case is whether the independent variable can explain variation in any of these three different ways of operationalizing job market success. For this purpose it is desirable to display the data for the three analyses in a single table, even though the underlying samples are slightly different. Table 3-4 is an example of such a table. The first column denotes various levels for the independent variable, columns 2-4 summarize the analyses. Each cell entry includes a mean score and, in parentheses, the number of cases on which the mean is based. Summary statistics appear at the bottom of each column.

BACKGROUND AND ABILITY

Socioeconomic level. The Youth in Transition measure of socioeconomic level (SEL) is similar to socioeconomic status as defined by Duncan and others; however, it is more comprehensive. It is derived from a combination of status and several other factors which are indicative of social advantage and disadvantage. Specifically, it consists of six equally-weighted ingredients: father's occupational status (Duncan Scale), father's educational attainment, mother's educational attainment, number of rooms per person in the home, number of books in the home, and a checklist of other possessions in the home. Bachman described the measure in this way:

> In summary, the measure consists of one 'part' father's occupational status, two 'parts' parents' education, and three 'parts' having to do with family possessions. While most or all of these ingredients undoubtedly have a bearing upon a family's status in the eyes of the community, they have perhaps even more to do with the quality of home environment available to children. To the extent that this is true, the SEL index is particularly well suited as a measure of one class of family background influences in our study of adolescent boys. (Bachman, 1970, p. 14)

The relationship of SEL to job attainment is shown in Table 3-4. It was anticipated that higher rates of unemployment would be associated with lower levels of SEL. This expectation was based largely on Department of Labor data which have shown that two types of youth who traditionally come from low SEL backgrounds -- inner-city youth and black youth -- experience much higher than average rates of unemployment (e.g., Goldstein, 1968). The data in the present study show that this hypothesis is largely

TABLE 5-4

Socioeconomic Level Related to Time 4 Job Attainment

Socio-economic Level	Labor Force	Full-Time Workers	
	Percent Unemployment	Average Duncan Status	Average Hourly Earnings
1 Low	20 (51)	17.7 (38)	$2.41 (37)
2	15 (108)	21.0 (82)	2.55 (78)
3	11 (101)	25.6 (149)	2.72 (141)
4	05 (118)	27.3 (99)	2.75 (97)
5 High	19 (62)	29.9 (45)	2.47 (41)
Column Mean	12.4 (520)	24.9 (413)	$2.64 (394)
Std. Dev.		15.1	.81
Eta	.16	.23	.16
Eta-square	.027	.053	.025

5532 5541 5543

NOTE: In each column, the left-hand number is the mean score for the category; the number in parentheses is the number of respondents in the category. See Table 5-1 for an explanation of the differing sample sizes. Labor Force: Respondent did not define himself as primarily a student or primarily in military service in Spring, 1970. Full-time Workers: 35 or more hours per week.

true; the rate is 23 percent for the lowest SES group and it declines linearly through the next to highest category (5 percent). However, among those from the highest SES families the unemployment rate is as high as for the lowest. Others have found high unemployment among those from well-to-do families (Goldstein, 1968, p. 47), but the dynamics have not been explained. It seems logical that those from disadvantaged families would be lacking in some aspects of education, motivation, and skills that are valued by employers. But what about the advantaged youth? The education is clearly there (almost all completed high school); but what about motivation and skills? Our study does not include measures of vocational skills, but it does include measures which suggest some motivational problems. Separate analyses were performed looking only at the unemployed and asking what differences there were among the five SES groups in terms of college plans held by these young men while they were still in high school. The highest SES group was ten times as likely as the others (combined) to have had plans at the end of eleventh and twelfth grades to enter college. They were four times as likely to have aspired throughout high school to very high status jobs -- ones that require additional education beyond high school. Additionally, there were differences in job attitudes. The high SES unemployed displayed much greater desire for job challenge than the low SES unemployed (one standard deviation in tenth grade; one-half standard deviation in the year after high school). A similar pattern was noted for desire for job payoff; the high SES group always displayed a greater need for a good-paying, steady job.

These data suggest that the dynamics of unemployment are different for the highest and lowest SES groups. In the highest many are in the labor force as an undesirable alternative, and they are frustrated by their inability to gain admission to college. To be faced with the prospect of taking a job which clearly does not lead to the high reaches of executive, doctor, or lawyer is tantamount to admitting failure to self and parents. Indeed, practically all of the high SES unemployed indicated early in high school that relatives and friends would "all feel bad" if they did not go on to college; this was true for only one-half of the lower SES unemployed.

The lowest SES group were much more likely to have dropped out of school or to have achieved low grades while in school. Their intelligence scores were lower also. These facts, coupled with the college plans and job attitude data, suggest that unemployment for this group is more likely to be caused by lack of qualifications or lack of motivation to work.

Status and Earnings. What about those who secured full-time jobs? Did those from high SES families secure better jobs? The

data in Table 5-4 indicate that they did. The association between SES and job status is relatively strong (beta = .23) and moderately close (the "betas" themselves did manage to secure higher status jobs.

The earnings for different SES groups are also displayed in Table 5-4. The relationship of SES and hourly wages is curvilinear. There is a positive association throughout the first four SES groups, but a marked drop in earnings for the highest SES group. It was considered possible that the relationship was confounded with the average wages being paid in an area, on the assumption that higher SES families might locate themselves in urban areas where average wages are higher. Using a measure of county wages for unskilled workers (described later in this chapter) we did not find this to be the case -- the relationship of SES remained just as strong after controlling for county wages.

The reasons for the lower wages of the highest SES group is unclear. Several hypotheses were explored but none were supported by the data. We can only note that there is a larger proportion that appeared in service and laborer jobs; both types are among the lowest paying jobs. (For a summary of job categories related to SES, see Table 5-4A in the Appendix.)

Intelligence. There are a number of reasons why intelligence might be related to job attainment. The more able might have more energy or look to go about finding the better jobs; and if unable employers usually want to hire the most capable among those who possess characteristics for employment. The data provide qualified support for each notion.

A number of tests of intelligence were administered to the 935 sample at the beginning of ninth grade (see Bachman, et al., (1967). Among these was the GATB-G, the Department of Labor's General Aptitude Test Battery (Part 1: Vocabulary). The relationship of the GATB-G to unemployment is shown in Table 5-5. The overall relationship is not significant, but for those in the lowest category of intelligence, the unemployment rate is 5.1% in ten times as great as any of the other categories of aptitude. But throughout the other four categories, intelligence appears to have little impact.

For those employed full-time, intelligence has a more differentiated effect. While the function is not very smooth, it is clear that higher intelligence is associated with entry into higher status jobs. The eta value of .28 ranks this dimension relatively among the strongest in this study.

TABLE 5-5

GPSS-2 Test of Intelligence Related to Time 4 Job Attainment

	Labor Force	Full-Time Workers	
GPSS-2	Percent Employment	Average Duncan Status	Average Hourly Earnings
1 Low	21 (73)	21.5 (53)	$2.41 (50)
2	50 (168)	30.2 (136)	2.74 (128)
3	71 (198)	27.8 (146)	2.69 (140)
4	73 (86)	31.7 (70)	2.64 (77)
5 High	72 (70)	34.9 (13)	2.62 (13)
Column Mean	52 (595)	25.3 (407)	$2.65 (456)
Std. Dev.		15.5	.82
Eta	.33	.28	.13
Eta-square	.072	.080	.016
N.W. r		.23	.09

NOTE: In each column, a left-hand number is the mean score for the category, the number in parentheses is the number of respondents in the category. See Table 5-1 for an explanation of the differing sample sizes. Labor force: Respondent did not define self as primarily a student or primarily in military service in Spring, 1973. Full-time workers: 35 or more hours per week.

The relationship to earnings is not so strong. The eta value is only .13 -- somewhat short of significance for a 5-category predictor. The two extremes in wages are found in adjacent occupational categories: average hourly earnings of $2.41 for the lowest (WCB-) group and $3.76 for the next to lowest. The remaining groups are all within $1 cents of each other, $3.08-$3.48 per hour. Some of the explanation for this may be found in the data shown in Table 5-5. This shows the hourly wages and the mean Duncan status for eight occupational categories. These very diverse groups -- (1) operatives (bus drivers, etc.), (2) clerical/sales workers, (3) technicians and managers of small businesses -- earned almost identical amounts ($3.04, $3.11, and $3.09 per hour respectively) at this point in their careers. However, their prospects for the future are probably quite different. The mean Duncan ratings for these same jobs are 35, 39, and 74. We think that the Duncan scores more adequately reflect the potential for future earnings and job status of individuals in these job categories. Thus the Duncan measure of attainment may be a more useful measure than income since it was constructed using average ratings of education and income for all workers -- young and old -- and is not subject to the constraint introduced by using incomes of only young and inexperienced workers.

Intelligence and Socioeconomic Level as Joint Predictors. We have established thus far that intelligence and family socioeconomic level are both predictors of the status of occupational attainment in the year following high school. It is well known that intelligence and family SES are correlated (for extensive documentation from our own research, see Duncan, 1970). Thus the question naturally arises: are the effects of family SES and intelligence upon occupational attainment separate and independent, or are they overlapping? To put it differently, if we already have a young man's intelligence scores will we improve our prediction of his occupational attainment if we also have his family SES?

In order to answer such questions we need to look at the joint prediction of occupational status resulting both family SES and intelligence as predictors. For such multivariate predictions we rely on a technique called Multiple Classification Analysis (or MCA). MCA was described in considerable detail in Volume II of this series (Duncan, 1970, pp. 62-73), and a complete description of the MCA model and the corresponding computer program is provided by Andrews, et al. (1967). It may be helpful to think of MCA as a form of multiple regression analysis that has a good deal of extra freedom, since it treats predictors as nominal scales. Like other multiple regression analyses, it computes a multiple correlation coefficient, R, which when squared provides an estimate of the total variance in the criterion which can be explained by all predictors operating together (in an additive fashion). Also, it can handle a wide range of interrelationships among predictors, a very important feature in dealing with highly correlated characteristics such as background factors and intellectual ability.

The Multiple Classification Analysis of occupational attainment, using both intelligence (OSTB-I) and family SES as predictors yielded a multiple-R of .31 (R^2 = .096).[1] This is substantially higher than the relationship for family SES (beta = .21, eta-squared = .042) but only slightly higher than the relationship for the OSTB-I measure of mental intelligence (beta = .27, eta-squared = .072).

Let us apply these data to the question we raised earlier. We find that if we know a young man's score on the OSTB-I, we can "predict" or "explain" 7.2 percent of the variance in the status of his post-high school occupation; if we also know his family SES, we can explain an additional 2.4 percent of that variance. Turning it around the other way, we can predict 9.2 percent of the variance in occupational status using family SES; but if we also know intelligence, we can predict an additional 5.4 percent of the variance. There is a good deal of overlap or "variance shared" between the two predictors; however, the "unique" (i.e., non-overlapping) predictive value of intelligence is considerably larger than that of family SES. We conclude, then, that intelligence is clearly the more

Accounting for Variance in Post-HS Status of Time 4 Job	
Unique to SES	2.15
Unique to OSTB-I	5.0
Overlapping or Shared	1.8
Total	9.05

important of the predictors; adding family SES provides only a small improvement in our prediction of occupational status.

PERSONAL RECORD

High School Completion. The impact of dropping out of high school on occupational attainment one year after high school has been reported extensively in Volume III of the Youth in Transition monograph series (Chapter 8, Bachman et al. 1971). In that publication the authors contrasted the occupational attainments of non

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[1] We converse the variances of R-squared and eta-squared for degrees of freedom. For this reason, the eta and eta-squared values are smaller than those presented in the tables for the bivariate relationships.

groups: stayins -- those who completed high school "on schedule" but did not continue their education -- and dropouts -- those who dropped out for more than a few weeks and did not, as of mid-1970, have a diploma. It was reported that dropouts were more frequently underemployed (unemployed or employed less than 30 hours per week) than graduates (29% vs. 13%). In the present study, unemployment is the dependent variable, but this does not alter the findings much. Table 5-6 presents the data. Unemployment among dropouts was 26 percent, and only 10 percent among graduates.

The overall strength of relationship between dropping out and unemployment is eta = .18; the corresponding eta-squared value is .033, indicating that 3.3 percent of the variance in unemployment can be accounted for by the dropout variable. These findings are statistically significant (p < .05). The fact that dropouts are less likely to be employed than graduates comes as no surprise, but, there is a more critical question than asking whether there are differences: namely, did the dropping out itself cause the unemployment or is the dropping out only a symptom of other characteristics which more parsimoniously explain the unemployment? To address this issue, a multiple classification analysis was performed, including SES, academic ability,[1] and dropout/graduate. A summary of the findings is contained in the following chart. The results

Accounting for Variance in Employment/Unemployment	%
Unique to SES & Academic Ability[1]	1.2%
Unique to Dropout/Graduate	1.4
Overlapping or Shared	1.3
Total Variance Accounted for	3.3%

indicate that the unique contributions of dropping out -- the portion which does not overlap with family background and ability measures -- is somewhat smaller than the other effects. The conclusion from these findings was expressed very well in Volume III and is reproduced below.

> We conclude from this analysis that dropping out may contribute to unemployment, but it makes a smaller contribution than family background and ability. Even

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[1] In the Volume III analyses, academic ability used a combination of the IAT8-J and the Canoe Reading Test. It was found that these two measures plus SES were the most "efficient" combinations of background variables in the sense that using any more background measures did not add enough new information to offset the additional "noise" or loss of degrees of freedom which resulted from having more predictor categories. Accordingly, in the present MCA both the IAT8 and Canoe were used.

> this conclusion may over-represent the importance of dropping out as a cause of unemployment, for there is an inequality between our ability to measure dropping out and our ability to measure accurately and completely the causes of dropping out. We can do a rather good job of measuring whether a young man has dropped out or graduated--especially when we simply exclude from analysis those whom we cannot fit clearly into one or the other category. But our measures of socioeconomic level are far from perfect, and our brief tests of vocabulary and reading skill leave much to be desired. If our measures of background and ability were as accurate as our distinctions between dropouts and graduates, we might expect background and ability to be much more impressive as predictors, and we might find still less unique prediction from dropping out to unemployment.[3] Yet even if we had perfect measures of socioeconomic level and flawless tests of vocabulary and reading skill, there remain other causes of dropping out, some of which we did not even attempt to measure. Just as family background and ability relate to both dropping out and unemployment, so may these other causes of dropping out also contribute to unemployment.
>
> In sum, we conclude that dropping out probably makes it more difficult to obtain employment; however, the more important causes of unemployment are those pervasive differences in background and ability which precede and help determine the act of dropping out. To put it another way, dropping out may contribute to unemployment, but it is also a conveniently-measured symptom of more basic causes of unemployment. (Bachman, et al., pp. 141-143).

In the same report, Bachman et al. reported that among all those who were employed full-time, dropouts earned the same or more in weekly income than their counterparts with diplomas. This was true even when controls were introduced for length of time on the job. More recent analyses done for the present report indicate that the same pattern holds for hourly wages, with dropouts averaging $2.77 and graduates $2.43 (see Table 5-4). While these differences fall short of statistical significance, dropouts clearly were not earning less than graduates.

When it comes to status of attained job for those working full-time, the pattern is reversed. Graduates were employed in

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[3] Evidence for this can be seen in the different figures that one obtains from an MCA when only the GATB is used instead of a combination of both the GATB and the Gates test. If only the GATB is used, the figures on the preceding page are as follows: Unique to SES and GATB, 1.5%; unique to dropout/graduate, 1.7%; overlapping or shared, 1.3%.

TABLE 5-6

High School Completion Related to Time 4 Job Attainment

High School Completion	Labor Force	Full-Time Workers	
	Percent Unemployment	Average Duncan Status	Average Hourly Earnings
1 Dropout	26 (90)	21.3 (62)	$2.17 (56)
2 Graduate	10 (440)	25.6 (365)	2.63 (350)
Column Mean	12 (530)	25.0 (427)	$2.45 (406)
Std. Dev.		15.3	.81
Eta	.16	.13	.16
Eta-square	.033	.018	.024

TABLE 5-7

Average Grades in Twelfth Grade Related to Time 4 Job Attainment

Twelfth Grade Average	Labor Force	Full-Time Workers	
	Percent Unemployment	Average Duncan Status	Average Hourly Earnings
Not in School	26 (90)	21.3 (62)	$2.17 (56)
E/D	7 (14)	23.2 (13)	2.80 (13)
D+/C-	15 (62)	24.3 (49)	2.56 (46)
C/C+	10 (104)	25.3 (103)	2.64 (100)
B-/B	8 (105)	27.9 (91)	2.56 (84)
B+/B+	10 (38)	25.4 (34)	2.49 (33)
Column Mean	12.4 (504)	26.0 (399)	$2.64 (380)
Std. Dev.		14.9	.81
Eta	.21	.15	.20
Eta-square	.040	.022	.038

jobs that averaged 27.8 on the Duncan scale while dropouts were in jobs that averaged 21.5. This difference also falls short of statistical significance with our small sample, yet we are inclined to believe that the difference is real and would be significant given a larger sample.

If the difference is real, we need to retain the same question asked earlier: did being a dropout actually prevent some from getting a high status job or was being a dropout only symptomatic of other characteristics of the individual which more parsimoniously explain the attainment of lower status jobs? Again, a multiple classification analysis was performed, this time including SES, IQ79-1, and Dropout/Graduate. The findings are summarized below.

Accounting for Variance in Duncan
Status of Time 4 Job

Unique to SES & IQ79	6.4%
Unique to Dropout/Graduate	3.3
Overlapping or Shared	6.7
Total Variance Accounted for	9.4%

As is see, the dropout variable had been able to explain one percent of the variance in status. But placed in an equation with background and intelligence measures, it could explain no variance that could not also be explained by the other measures. In other words, if a young man comes from a low SES family and scores very low on intelligence measures, completing high school does not make any difference, on the average, in the status of the job which he is able to secure.

Overlapping variance is always subject to interpretation; what follows seems most plausible to us. Since the characteristics of the individual such as his family background and intelligence were assessed well prior to the act of dropping out, it seems logical that it is these factors -- and not the act of dropping out itself -- which is the cause of the dropout's securing lower status jobs than graduates. For this reason, it is unlikely that additional schooling or the attainment of a diploma would, of itself, improve the dropout's chances of securing a better job. (For a discussion of how dropouts fare about job entry without a diploma, see Rachman, et al., 1970, Chapter 9.)

Again it should be noted that this study is dealing with young men. We are quite eager to return to the sample in the spring of 1970 and document their job attainments five years beyond normal graduation. We anticipate that we will continue to find differences between dropouts and graduates, and indeed that may be even larger. But once again we will want to examine whether such differences are best explained by the act of dropping out or by personal traits that were apparent long before the dropout's exit from school.

School Performance (Average Grades). There are several reasons for expecting grades earned in school to be related to occupational attainments. One reason, of course, is that grades are related to such things as intelligence and family SES (Jencks, 1970); and we have already seen that these dimensions of ability and background are associated with status of post-high school occupation. Thus even if grades had no separate influence on occupational outcomes, we would still expect to find a correlation simply because grades are a surrogate for background and ability.

But there would probably be more than just a surrogate effect leading to a relationship between grades and occupational attainments. Grades in some instances should serve as a useful credential. When an employer chooses among several candidates for a job he needs some indication of how they might perform. Lacking test scores for specific job-related skills, an employer might be willing to assume some correspondence between academic performance and ability to catch on quickly to the intricacies of a particular job. In other words, an individual with high grades might be considered more "employable," and thus more attractive to an employer.

The data appear in Table 3-3. The measure of academic performance is a self-report of average grades obtained throughout twelfth grade. Dropouts were placed in a separate category. The "A" category of grades appears to have a higher rate of unemployment, but the difference is not large enough to warrant much confidence in the estimate. The overall relationship with unemployment is fairly strong (eta = .23), but most of this is due to the dropout/graduate distinction and not to grades. (Recall that an eta of .28 is associated with the dropout/graduate measure.)

The pattern of relationship with Duncan status is similar to the one for intelligence, but the overall strength of association falls short of significance. As for average hourly earnings, there is no meaningful relationship for grades. From all this, it appears that grades make no unique contribution to early occupational outcomes -- at least for the subset of young men who do not continue their education beyond high school.

Job Experience During High School. Another credential which a young man presents to a potential employer is his previous employment experience. In Chapter 4 we traced the types of work experience this sample had during high school. Now we ask whether such experiences show any impact on job attainment. A number of exploratory analyses indicated that little was to be gained from using a complicated variable which contained all the permutations of working/not-working during grades 10-12. Accordingly, a variable was constructed which simply contained the information of how often the respondent had been working. The maximum was three times, indicating that the individual was working part-time or full-time each of the three times he was interviewed between the beginning of tenth and the end of twelfth grade.

The relationship of this measure to unemployment is shown in Table 5-6. The measure does show a moderate relationship to whether or not the individual was employed in the spring of 1973. Although the differences fall short of statistical significance, unemployment clearly declines monotonically as the amount of work experience increases. The analysis was repeated for graduates only, and the shape and strength of association was the same.

For status and wages, work experience during high school does not seem important. The between-group differences are small, as is the overall strength of association.

Two other measures of part-time work experience were used in an attempt to uncover any possible relationship between high school work experience and job attainment. One measure is the number of summer jobs held between ninth and twelfth grades. This does not account for variability in any of the three criterion measures. The other measure is the total number of months worked between approximately eighth grade and the end of high school. This variable predicts moderately well to both unemployment and hourly wages, although the shape of the relationship is somewhat "lumpy" (see Table 5-6). The relationship between the broadened measure and unemployment is statistically significant. But, since the particular curvilinear relationship is not an expected one, we imposed a more stringent test of linear relationship. The resultant product-moment correlation, $\underline{r} = -.12$, falls just short of statistical significance ($p = .05$) with an effective sample size of 134. The correlation with hourly earnings is $\underline{r} = .17$, which is statistically significant.

This measure of months worked during high school intrigued us for some time, and we performed a number of additional analyses using it. One particular interaction was discovered which is worth

TABLE 5-8

Job Experience During High School Related to Time 4 Job Attainment

No. Times Working*	Labor Force	Full-Time Workers	
	Percent Unemployment	Average Duncan Status	Average Hourly Earnings
None	19 (96)	23.4 (73)	$2.45 (68)
One	14 (168)	23.6 (120)	2.67 (126)
Two	11 (102)	28.8 (120)	2.71 (115)
Three	5 (108)	28.6 (92)	2.66 (87)
Column Mean	12 (503)	25.0 (401)	$2.65 (396)
Std. Dev.		10.3	.62
Eta	.16	.30	.23
Eta-square	.027	.090	.052

(chi) (prob)

* This is a measure of the total number of times the respondent reported that he was working at the time of our first three Interviews. For dropouts, some reports indicated working after having left high school.

TABLE 5-9

Months Worked During High School Related to Time 4 Job Attainment

Total Months Worked	Labor Force	Full-Time Workers	
	Percent Unemployment	Average Duncan Status	Average Hourly Earnings
1 of 12	19 (157)	22.8 (109)	$2.45 (113)
2 13-23	11 (161)	24.8 (105)	2.62 (103)
3 24-32	16 (86)	25.8 (71)	2.81 (66)
4 >32	3 (100)	31.7 (111)	2.73 (107)
Column Mean	12 (530)	25.1 (407)	$2.65 (406)
Std. Dev.		10.0	.62
Eta	.20	.16	.21
Eta-square	.039	.025	.046
Pearson r	-.12	.10	.17

(chi) (prob)

TABLE 5-10

Combination Variable of Educational Attainment and Months Worked Predicting to Unemployment

Educational Attainment	Months worked	Frequency	Percent Unemployment
Dropout	0 - 9	16	44%
	10 - 19	29	31
	20 - 29	23	22
	> 30	31	10
Graduate	0 - 9	132	15
	10 - 19	128	8
	20 - 29	73	15
	> 30	98	1
Total		521	12%
Eta [adjusted]		.32	
Eta-square [adjusted]		.099	

[illegible]

working hours; Table 5-10 displays the data. Months worked interacts with the dropout/graduate measure. When these two measures are joined in a single combination variable, the two measure accounts for 23 percent of the variance in unemployment. But the pattern is complicated; it is monotonic for dropouts, but quite "bumpy" for graduates. Part of this difference may owe to the fact that the measure of months worked has a slightly different meaning for dropouts and graduates. The measure is the total number of months worked between eighth grade (1964) and the time when the Class of 1969 graduated from high school (June, 1969). For dropouts, the measure of months worked includes not only part-time employment while attending school, but also full-time employment accured after leaving school. Thus, for dropouts, the data in Table 5-10 indicate simply that working at one point in time is a good indicator of employment at a later point in time. Certainly, this is not very surprising; those inclined to secure employment immediately after dropping out of school are also most likely to be employed at any later point in time.

For graduates, the measure indicates the total months worked while still attending school. For graduates, then, we are asking the question: does part-time work during high school impact on the likelihood of being employed after high school? The data suggest that it might. Those who worked a total of ten months or less showed an unemployment rate of 15 percent, and those who worked in excess of 30 months had a rate of one percent. But the success of those in the two intermediate categories was quite irregular.

Let us assume for the moment that there is a relationship between months worked and unemployment, and that measurement error is responsible for the relationship's not being stronger and more monotonic. We still need to ask a basic question about the meaning of the measure. On the one hand, extensive work experience could be a factor which "teaches" individuals how to seek out employment and the additional experience is rewarded by employers with higher wages. On the other hand, a high score on the measure could indicate the presence, prior to any employment, of certain values and traits which prompt some individuals to seek out part-time work as early as junior high school and full-time jobs after they leave senior high school. These same traits could impress employers enough to hire such individuals into jobs with better wages than most entry jobs. In this case, work during high school would not itself be a cause of more successful outcomes in the regular labor force; rather it would be a symptom of whether or not individuals possessed certain traits in early adolescence which would later give them an advantage in the job market.

Extensive exploration of the data did not provide definitive support for either interpretation. Providing support for interpretation of the measure as a symptom of individual differences was the following discovery. Separate measures of months worked during grades 10-12 did not predict as well to later attainment as did a single measure of months worked during grades 8-9.

Arguing against the measure being considered only a symptom of more basic causes of later job success were the following findings. A multivariate analysis (MCA) was performed on unemployment, using SEL and academic ability (GATB and the Gates Reading Test). The analysis included high school graduates only. After correcting for degrees of freedom, the resultant R-squared was 0.0. The MCA was repeated, adding the months worked measure, and the resulting adjusted R-squared was .028. This indicates that 2.8 percent of the variance in unemployment could be explained uniquely by months worked (i.e., the variance it explains does not overlap with family background and academic ability).

Additional analyses were reported at the end of the previous chapter. These indicated that no association could be found between work during high school and some of the other measures available such as self-esteem, flexibility, Desire for Job Payoff, Desire for Job Challenge, and ninth grade classroom grades. It must be noted, however, that YIT does not include measures of all of the relevant possibilities, such as work ethic of parents and other potential family influences; nor does it contain measures of other potentially relevant characteristics of the individual. In sum, we have settled on what is admittedly a compromise. We think that months worked probably represents a mixture of both cause and symptom. Part-time work probably does help prepare a high school student for the regular labor force; but then again, those who are likely to secure this type of employment are by temperament already prepared for full-time work and thus do not gain an advantage in later competition in the regular labor force. Since working during high school is an activity over which individuals and policy makers have some control -- unlike family background and intelligence -- we think that it is important that future research explore the concept further and try to establish the extent to which part-time work during high school actually helps youth to make the transition more successfully to full-time work.

Age. The Youth in Transition sample is a grade cohort, and as such contains a range of ages. Some of this range is due simply to differences in birthdays and to some variance in state attendance laws regarding the required age for beginning school. The other factor affecting the variance in age is rate of educational advancement: older boys in a grade are frequently those who, at some point in their education, were held back a year or more. It was thought possible that some of these older boys might have an advantage in the job market by virtue of their greater age, even though some of this natural advantage might be counterbalanced by the correspondingly lower intelligence and school achievement scores. Analyses relating age to occupational attainment failed to show any interpretable results.

Race. The YIT study was not designed to address the issue of racial differences. In the original sample of 2213 respondents there are 260 blacks, or about 12 percent of the total. However,

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[4] At Time 3 he did not report the number of months worked; a number was imputed for him as follows: 0=no work between the end of 11 and the end of 12th grades; 5=worked during senior year; 8=worked during senior year and the previous summer.

among those respondents at Time 1 who were employed full-time, the number of blacks in only 62 -- hardly enough to characterize accurately the experiences of black male youth.

With this caution in mind we might note that we find, like other studies, that blacks experienced unemployment much more frequently than whites, and that these differences fail to disappear when controls are introduced for SES and intelligence. However, among those who were employed full-time the differences in status and earnings disappear when controls are introduced for family background (SES) and intelligence (AFQT-3).

WORK ATTITUDES AND VALUES

In this section we examine a set of variables which reflect an individual's orientation to the world of work. Two variables, Desire for Job Challenge and Desire for Job Payoff, capture some expressed needs of young men for jobs with certain characteristics. A third variable, Vocational Maturity, measures the extent of personal commitment to specific occupational goals.

Desire for Job Payoff. Desire for Job Payoff (see Chapter 3) is an index which measures the extent to which it is important to an individual to secure a job with: good pay, little chance of being laid off, and good opportunity to "get ahead." One might assume that these factors are important to everyone with responsibilities for self and/or family support. But, even if this were true, it is not obvious that these factors should be important to teenagers, since most of them live with their parents as dependents and are somewhat removed from the responsibilities of "earning a living."

Desire for Job Payoff was measured on a scale that runs from 4.0 ("very important to me") to 1.0 ("not at all important to me").[5] The items were included in all four data collections. Each time the average rating was very high, with a mean score close to 3.5 and a standard deviation of 0.6. This indicates that even at age 15 the concept of high job payoff is widely endorsed by young men to be an important dimension of the job one hopes to enter. But, does holding such an attitude improve a young man's chances in the labor market? Our answer is a qualified no. Some of the relationships

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5 The scale numbers are reversed from the questionnaire scale to allow a high score to correspond to high importance.

TABLE 5-11

Gains For Job Payoff (10th & 12th Grade)
Related to Time 4 Job Attainment

10th Grade	Lost Force Persons	Unemployment	Full-Time Workers Average Duncan Status	Average Hourly Earnings
1 Low	11 (47)		21.7 (36)	$2.79 (36)
2	11 (47)		23.2 (51)	2.46 (50)
3	12 (94)		24.6 (146)	2.59 (137)
4 High	8 (74)		26.6 (155)	2.71 (132)
Column Mean	12 (524)		25.0 (416)	$2.64 (397)
Std. Dev.			15.0	.82
Eta	.2		.11	.12
Eta-square	.13		.031	.016
P-40 p			.12	

12th Grade				
1 Low	16 (50)		21.2 (37)	$2.46 (36)
2	12 (40)		21.6 (46)	2.64 (45)
3	14 (219)		25.9 (170)	2.59 (160)
4 High	11 (186)		26.2 (152)	2.77 (146)
Column Mean	13 (517)		25.0 (407)	$2.65 (388)
Std. Dev.			15.0	.82
Eta	.4		.13	.12
Eta-square	.03		.016	.015
P-40 p			.11	

5-11.3 Sibs-1

are statistically significant, but some of the patterns of association are suggestive. The data appear in Table 5-11.

The twelfth grade measure is associated (γ = .3) with family status. This fails short of significance for our standard sample, but the patterns does make sense; those most desirous of high-payoff jobs were engaged in the highest status jobs. The relationship with family wages is weaker, although again the patterns makes sense: those for whom high payoff jobs were most important were earning the highest wages. The measure does not relate to unemployment. The tenth grade measure is associated with status (γ = .22) as strongly as the twelfth grade measure. However, it is not associated with wages.

This discussion is not an attempt to discover significance where there is none. We simply recognize that there are limitations to our measurement of desire for job payoff. With such a global measure it is difficult to obtain a strong level of association even if the underlying concept is important. Therefore, while unimportant in this study, our data indicate a potential for stronger relationships with a more refined measure of desire for job payoff.

Desire for Job Challenge. This measure focused on a different dimension: the desire for a job with opportunities for development of one ability and utilization of current ones (see Chapter 3). A person who is high in desire for job challenge considers importance to having a job that permits him to learn new things, use his skills, and get ahead. Conversely, he is willing to work hard and take responsibility.

The tenth and twelfth-grade measures of challenge were run against the five job attainment measures. Again the results are mixed. The twelfth grade measure shows a moderate association with job status (γ = .33), but is basically unrelated to earnings and unemployment (the data appear in Table 5-12). The tenth-grade measure was equally strong in predicting status of attainment, and was even a moderately good predictor of hourly wages.

In the case of job challenge, the weak association is understandable. Among those jobs open to youth it is likely that there is less variability in challenge than wages. In support of this hypothesis, the Survey of Working Conditions Project at the Survey Research Center found that young workers typically place a high value on challenging work, but say that the work they are doing has a low level of challenge.

TABLE 5-12

Decline for Job Challenge (10th & 12th Grade)
Related to Time & Job Attainment

10th Grade	Labor Force: Percent Unemployment	Full-Time Workers: Average Duncan Status	Full-Time Workers: Average Hourly Earnings
1 Low	14 (.366)	23.3 (.346)	$2.39 (.127)
2	12 (.272)	25.3 (.175)	2.60 (.164)
3	11 (.169)	26.3 (.87)	2.72 (.82)
4 High	6 (.19)	28.3 (.14)	3.12 (.13)
Cultural Mean	12 (.823)	25.3 (.910)	$2.64 (.394)
Std. Dev.		10.3	
Chi	.37	.14	.12
Chi-square	.009	.019	.015
R-sq. p		.12	

12th Grade			
1 Low	18 (.134)	22.3 (.89)	$2.65 (.14)
2	8 (.197)	25.1 (.173)	3.41 (.166)
3	13 (.152)	27.3 (.121)	3.69 (.116)
4 High	15 (.27)	28.3 (.21)	3.84 (.15)
Cultural Mean	12 (.153)	25.3 (.804)	$2.65 (.167)
Std. Dev.		12.3	
Chi	.14	.12	.27
Chi-square	.023	.021	.029
R-sq. p		.11	

(Only)

Occupational Behavior: Commitment to Long-Range Occupational Plans. This measure is based on a concept that has been developed and researched extensively by Donald Super (1957, 1963, 1963). At the most general level it is a measure of the degree to which an individual engages in vocational planning activities which are thought to be characteristic of the particular stage of vocational development. A vocationally immature young man of 18 would have no job preferences at all. A vocationally mature 18-year-old would aspire to a specific job; in addition, he would feel quite certain that his choice was realistic, would actually work out, and would be satisfying. (Details on the way in which the measure was operationalized using the YCS data can be found in Johnston and Bachman, 1972, pp. 53-56.) This description leads us to postulate that the vocationally mature individual would be more motivated to work out a good job. If we assume that higher status jobs are more difficult to secure than lower status jobs, then the more immature or unmotivated would be less likely to aggressively pursue the high-status job. Instead, he would more readily settle for any form of work for which he could be hired.

The data in Table 5-23 provide modest support for this notion. The shape of the relationship is as predicted. However, 70 percent of the sample, clustered in the three center categories of maturity, show very little difference in attainment. It is only the tails of the distribution -- categories 1 and 7 -- that account for the association. The measure showed no relationship to earnings or unemployment.

We have discussed three attitudinal variables in this section and they have shown only minimal associations with attainment. A large number of personality variables were examined as well, but these did not show sufficient association to be discussed here. So far as we can ascertain, attitude and personality variables have minimal utility in trying to explain job attainment. While measurement improvements could explain some of this, it still seems likely that attitudes may be have little to do with the occupational entry process immediately after high school.

Success in the Employment Environment

In the process of evaluating a prospective employee, an employer must consider a number of factors which impact on the relative attractiveness of any employee's credentials. One such factor is the supply of unemployed workers in an area. The larger the supply, the more willing an employer will be to wait for answers before to some delay. Another factor in the prevailing wage rate in the area for workers with the necessary skills, since an employer has to decide whether he can afford the labor employee or must take someone less qualified who will not cost as much. Such

TABLE 5-13

Vocational Maturity at the End of Twelfth Grade
Related to Status of Time of Job

Category	Full-Time Workers Average Duncan Status
1 No occupational plans	25.8 (62)
2 Some plans, not very committed	24.3 (24)
3	24.2 (116)
4	25.3 (156)
5 Some plans, very committed	28.6 (46)
Column Mean	25.3 (426)
Std. Dev.	15.3
Eta	.13
Eta-square	.018

of these factors is in turn influenced by economic and other characteristics of the region and area. In this section we examine how much impact these factors have on the job attainments of the young men in our sample.

County Unemployment. In a geographical area in which unemployment is high, an employer can be quite selective in choosing a new employee. He can afford to take down all but the most qualified, of the many workers who possess shortcomings for selection. For the recent graduate, high unemployment in an area should work against his securing the job of his choice. More people would be competing for the available jobs, many of whom would have an inner-city full-time job experience and therefore have more saleable skills. The opposite circumstance should prevail in an area with low unemployment. There, the employer is forced by the low supply to be less discriminating and perhaps lower his standards. This circumstance favors the recent graduate since an employer is more likely to choose him in spite of his inexperience and compensate by training him on the job.

The Bureau of the Census does not collect unemployment data specific to the counties used in this study. Accordingly, some other source was needed for information on unemployment. James Morgan of the Survey Research Center provided a reasonable substitute for official figures. For some years he has been conducting a study of family income dynamics for the Office of Economic Opportunity. In this study he has needed annual county-level information on unemployment and average wages. The counties used in the Youth in Transition study overlap completely with the counties in the Morgan study.

To gather information, Morgan contacts the appropriate state employment office in the spring of each year and asks them to answer six questions about each of the areas in an attached list. The list includes five to twenty counties or metropolitan areas. The questions ask about the employment and wage situation in each area for the previous fiscal year (FY).

Table 3-2a shows the relationship of the unemployment data for FY 1967 to job attainment at Time 1 (T1 (FY)). The results show little or no relationship of average unemployment levels to the unemployment experience of our youth sample. The relationship to job status is somewhat stronger: in areas with critical unemployment (5-10 percent) the average job attained was lower by status by one-third standard deviation. We repeated the analysis, relating county unemployment in FY 1970 to status of attainment and a similar picture emerged: only in the areas with the highest rates of unemployment (greater than 10 percent) did the youth acquire jobs of lower-than-average status.

These findings may underestimate the true impact of a high unemployment environment. In a earlier study which focused on military enlistments after high school (Osterman and Eastman, 1972) the authors discovered that enlistment rates were a constant 11 percent in areas with unemployment in the range 3-6 percent. But in counties with greater than six percent unemployment, enlistments jumped from 11 to 15 percent. In other words, youth in these high unemployment areas were more likely to choose military service than be unemployed or take an undesirable job around home.

Earlier, it was suggested that an unemployment depressed environment, young workers should be able to secure better jobs than usual, reflecting the unavailability of more skilled competition. The data in Table 3-2a do not support this. The reason is not clear. It may be that the hypothesis is correct, but that it applies only under conditions of an actual shortage of labor and that none of the areas in this study -- even those with less than ten percent unemployment -- could be characterized as having an actual shortage.

TABLE 5-14

County Unemployment Data (FY 1980) Related to
Time to Job Attainment (FY 1975)

FY 80 County Unemployment	Labor Force: Percent Unemployment	Full-Time Workers: Average Duncan Status
1 = 25	8 (17)	26.7 (14)
2 3-5.99	12 (85)	31.8 (266)
3 6-8.99	13 (118)	28.4 (109)
4 9-100	12 (30)	19.8 (27)
Column Mean	12 (329)	31.3 (809)
Std. Dev.		15.3
Eta	.09	.15
Eta-square	.001	.014

TABLE 5-15

Average Wages for Unskilled Male Workers Related to
Average Hourly Earnings

FY 81 County Wages	Average Hourly Earnings
1 1.50 - 1.99	$2.43 (146)
2 2.00 - 2.49	2.75 (142)
3 2.50 - 2.99	2.78 (63)
4 3.00 +	3.27 (28)
Column Mean	$2.66 (379)
Std. Dev.	.79
Eta	.07
Eta-square	.005

Another possible explanation is that a measure like male unemployment is too crude and that a more specific measure is needed, such as white unemployment for males age 16-21. Another factor may be the choice of unemployment rates averaged for an entire fiscal year; a much better measure would be one which measured the county unemployment rate during the month immediately preceding job seeking or job entry.

Wage Rates. Another question in the Morgan data asked, "What is the highest wage that an unskilled male worker might receive?" The responses ranged from under $1.50 to $3.00 per hour. This showed no clear pattern of relationship to status of attainment. The product-moment correlation was $\rho = -.01$. On the other hand it did show a strong positive relation with individual earnings. Averages for unskilled males in the 1970 Census year predicted individual wages with an r^2 of .21. (See Table 5-15.)

Region and Urbanicity. We considered the impact of both region and urbanicity (city size); Table 5-14 shows the patterns of association with attainment. Unemployment appears to vary with urbanicity, reflecting local differences in the availability of jobs and/or qualified youth. But the small eta of .09 indicates that the variance within each of the classifications of urbanicity is so large that the particular estimates cannot be trusted. Similarly, the relationship of region and unemployment appears to show some overall mean differences, but the variation within each region is quite large and the eta of .07 falls short of statistical significance.

Among the full-time workers, urbanicity is a very important factor in the status of job attained after high school. By itself this factor can explain 6.3 percent of the variance. Those from rural areas obtained the lowest status jobs, Duncan average of 25.7. Next in small towns, small cities, and medium cities occupied jobs that averaged about 31, while those in suburbs and large cities obtained jobs averaging about 36. A lot of this variation presumably has to do with the types of jobs which are available: a large city has many more high status jobs such as scientist, teaching technician, and various clerical positions. So the chance factor of a young man's geographical location plays an important part in the status of the job which he accepts after high school.

Although the wages of full-time workers vary somewhat according to urbanicity, the eta is not statistically significant. But there are statistically significant differences among the four regions in the wages paid to young men. The lowest wages are associated with the South and the highest with the north central states. (See glossary for a list of the states which fall into these regional breakdowns.) These findings indicate the importance of a young man's physical location in determining both the quality of the job and the amount of compensation he receives.

TABLE 5-16

Urbanicity and Region Related to Time X Job Attainment

	Labor Force		Full-Time Workers	
Urbanicity	Percent	Unemployment	Average Duncan Status	Average Hourly Earnings
1 Rural	12 (131)		16.7 (110)	$2.44 (90)
2 Small Town (<25 K)	14 (108)		24.9 (82)	2.81 (79)
3 Small City (25K-50K)	14 (71)		26.3 (50)	2.55 (43)
4 Med. City (50K-250K)	8 (62)		25.1 (76)	2.89 (76)
5 Suburb (near or remot.)	13 (79)		29.3 (67)	2.76 (44)
6 Large City	17 (60)		30.8 (40)	2.72 (30)
Column Mean	12 (530)		25.3 (427)	$2.65 (408)
Std. Dev.			15.8	.82
Eta	.38		.25	.16
Eta-squared	.066		.063	.027

	Labor Force		Full-Time Workers	
Region	Percent	Unemployment	Average Duncan Status	Average Hourly Earnings
1 West	13 (86)		27.4 (63)	$2.65 (56)
2 North-Central	11 (139)		24.8 (106)	2.81 (101)
3 Northeast	9 (110)		25.1 (86)	2.66 (80)
4 South	13 (167)		24.4 (109)	2.60 (105)
Column Mean	12 (530)		25.3 (427)	$2.65 (408)
Std. Dev.			15.8	.82
Eta	.07		.11	.07
Eta-squared	.053		.024	.048

Joint Prediction of Status Using Intelligence, Socioeconomic Level and Ethnicity. The importance of ethnicity in studies of occupational job success has been the question of how much variation can be explained by characteristics of the individual if one already knows his geographical location? The only measures of personal characteristics which proved themselves in terms of biographic accuracy were family background and intelligence. Accordingly, these were entered into a Multiple Classification Analysis along with ethnicity. This produced a multiple-R of .36 (R^2 = .131). Recalling that SES and intelligence jointly explain 9.4 percent of the variance in occupational status, we can break down variance accounted for into its component parts. Personal factors still account

Accounting for Variance in Current
Status of Time 4 Job

	Percentage of Variance	Grade Point Average
Unique to SES & IQ	1.4%	4.7%
Unique to Ethnicity	3.3	0.9
Overlapping or Shared	1.7	1.8
Total	13.1%	11.4%

actually for more than twice the variance unique to ethnicity, than the importance of geographic location (agreement). When the analysis was repeated for high school graduation only, the three predictors accounted for about the same degree of variance. However, ethnicity and IQ/SES accounted for more variance at the expense of family background.

What strikes us here about these data is the degree to which the status of the first job after high school is determined by factors largely outside the individual's control -- his intelligence, his family socioeconomic status, and ethnicity. Of course, the individual can influence whether he drops out of high school or not, but this dimension dimmed as unique explanatory power in our analysis of job status. The implications for policy-makers are somewhat discouraging, for these factors which lie largely outside the individual's control are also difficult or impossible to influence through social policy.

Joint Predictions of Wages. In this chapter, four measures showed a strong association with a young man's wage rate shortly after high school; these include his family background (SES), months worked during high school, region of residence, and the prevailing wage rate for unskilled labor in the county where he is employed. All four variables were entered into an MCA. Analyses were performed

Accounting for Variance in
Wages for Time 4 Job

	Unadjusted $ Single Deviation	Single Beta Weight
Unique to region & county wages	4.30	4.70
Unique to Months worked	2.1	*
Unique to SES	1.3	*
Overlap	0.5	1.7
Total	9.43	6.40

*Slight negative relationship

first for the entire group who were employed full-time, then for the subset who graduated from high school. At first glance the results seem to indicate that the dynamics are different in the two samples. For high school graduates, the only factors that make a difference are relatively contemporary: region and county wage rates. In the multivariate analysis, the months worked and SES measures did not explain unique any of the variance in wages. This is evident from the fact that all their explanatory power overlapped that of the region and county wage rate measures. One interpretation of this overlap is that since the contextual variables can explain as much variance by themselves as can a combination which includes other factors, then only geographic imperate significantly on the wage rate obtained by recent graduates.

When high school dropouts are included in the analysis, different pictures emerge in charge. Some of the variance in wages can be explained -- 6.4 pp. 7.4 percent -- and other predictors display an ability to explain this variance. Geographical location is still

the strongest predictor, but some of the additional variance in wages is explained by the months worked measure. Recall from earlier in this chapter that the months worked measure has a special meaning for dropouts. For most of them the measure assessed months worked in a full-time job after leaving school. Thus, the relationship of the months worked measure indicates only that some dropouts have a wage advantage over graduates because they have more job experience in the regular labor force. In effect, the two MCAs suggest the same conclusion: for entry jobs, wage rates for 18-21 year old males are almost completely determined by the wage rates prevailing in the locale of employment. Part-time work experience in high school is not rewarded by employers. However, the wage advantage of dropouts from the same high school class indicates that experience in the regular labor force does get rewarded. As with the status of attained occupation, we do not see any policy implications flowing from these findings on the factors influencing wage rates.

Unemployment. All of the relevant multivariate analyses predicting to unemployment have been reported earlier in this chapter. At this point, we will simply summarize the findings. The most important determinants of unemployment among young men recently out of high school is their family background and academic ability. The highest levels of unemployment are associated with very low scores in academic ability (verbal intelligence) and with being from a family whose socioeconomic class (SEL) is very low. For the unemployed in these groups the most likely explanations for their behavior seem to be limitations in ability and work motivation.

Another group with a high level of unemployment associated with it are the young men from families at the top of the socioeconomic scale. For the unemployed young men in this group the reasons for unemployment seem quite different. Many of them are in the labor force as an undesirable alternative to college. Throughout high school they consistently expressed plans for college and aspired to jobs that required additional post-high school education. For some reason they were not able to go to college -- perhaps they could not qualify at the institutions of their choice. To take a job now would be tantamount to admitting to self and parents that they could not achieve their aspirations. Ambivalent over their future, they make a "non-choice" -- unemployment.

Another strong predictor of unemployment is dropping out of high school. Unemployment rates for dropouts averaged 26 percent while for graduates they were only 10 percent. However, this finding is deceptive. Controlling for family background and intelligence, much of the effect of dropping out disappears. Accordingly, we conclude

that dropping out probably makes it more difficult to obtain employment; however, the more important causes of unemployment are those pervasive differences in background and ability which precede and help determine the act of dropping out. To put it another way, dropping out may contribute to unemployment, but it is also a conveniently measured symptom of more basic causes of unemployment.

One other predictor of unemployment was months worked during high school. In general, extensive work experience during high school is associated with very low levels of unemployment, while failure to work during high school has high rates of unemployment associated with it. Unfortunately, the measure of months worked during high school does not relate to unemployment in a linear fashion, so we must qualify our findings on its importance. We think that additional research should be done in this area to determine precisely the effects of such experience on adolescents' later labor market success. It is especially important since it represents an area subject to influence by social policy-makers.

COMPARISON WITH THE OHIO STATE STUDY

One major study parallels the present research; it comes from the National Longitudinal Surveys Project at Ohio State University, sometimes called the Career Thresholds study. The parent project, directed by Herbert Parnes, is an on-going longitudinal study of several age cohorts ranging from youth to those near retirement. One phase of the study is examining the labor market experience of noninstitutional males, aged 14 to 24 (as of the year 1966). The most recent report on this topic appeared in January of 1973, authored by Andrew Kohen, and is entitled, "Determinants of Early Labor Market Success Among Young Men: Race, Ability, Quantity and Quality of Schooling." The analysis strategy is carefully conceived and the results thoroughly digested and integrated with the findings of other researchers. The analyses were based on a sub-sample of 665 whites and 142 blacks who met the criteria of being "American men 18 to 24 years of age in the civilian population (in 1966) who were out of school and had completed at least eight years of schooling" (Kohen, 1973a, page 8). Thus defined, Kohen's sample represents all those in the present Youth in Transition (YIT) study, but it includes as well many who are not represented in YIT for the present analyses. Specifically, over one-half of Kohen's sample pursued their education beyond high school. As a consequence, his sample includes a broader range of educational attainment and those characteristics associated with college attendance: high SEL and intelligence. Another consequence is that his young men were engaged in a broader range of jobs than those in the YIT sample.

Kohen's study involves cross-sectional and not longitudinal analysis, an important distinction when a purpose of the design is to predict job attainment at one point in time from characteristics, attitudes, and behaviors present in the individual at an earlier point in time. All of Kohen's variables were measured in 1966, four years prior to the 1970 collection of job criteria data in the YIT project. The dependent variables are almost identical in the two studies: unemployment, status of attained job, and hourly wages. Status and wages were operationalized identically in both studies, but unemployment was operationalized in a slightly different fashion. Kohen's explanatory variables include SEL (constructed in a similar fashion to the YIT measure), intelligence (operationalized by standardizing the scores of the various intelligence measures which were available in respondents' school records), years of education, quality of education, race, number of sibs, and health of respondent. The first three of these -- SEL, intelligence, and quantity of schooling, -- were the most important predictors of attainment and are the ones which will be discussed here.

Unemployment. Both studies find that the unemployment dimension is a difficult one to explain. It is our feeling (and Kohen's as well) that this is due in large part to the skewness of the measure. The statistical methods utilized in both studies assume a reasonably normal distribution on the dependent variable. However, the present study did uncover some interesting differences for subgroups on various predictors, even though it was difficult to explain large portions of variance in the measure of unemployment.

Status and Wages. Kohen's principal findings with respect to predicting wages and status are summarized below in a series of excerpts from his report, focusing primarily on his findings for whites.[6]

> The regression results...using WAGE as the dependent variable offer considerable support for the hypothesized independent effects of mental ability, amount of schooling and poor health on early labor market success.... The estimated parameters in the WAGE equation for whites... lead to rejection of the hypothesis that family background has a direct impact on early labor market success, though its indirect influence via ability and schooling is very evident.

---

[6] A major thrust of the Parnes and Kohen studies is an examination of black/white differences in occupational outcomes. As discussed earlier, the number of blacks in the YIT sample is small. Accordingly, we have chosen to limit this comparison to findings for whites.

> Examination of the results for the equation which uses occupational STATUS as the measure of success reveals considerable similarity between it and the WAGE equation.... For whites it is clear that the same principal direct causes (i.e., ability, schooling and health) are operative on the pecuniary and nonpecuniary dimensions of early labor market success. Unfortunately, the regression results do not permit an unequivocal conclusion regarding the hypothesis that family background has an independent indirect influence on a young man's early occupational achievement. (Kohen, 1973a, pp. 82-84 passim)

> The statistical evidence is consistent with the hypothesis that mental ability is an independent, direct determinant of early labor market success...(although) the path-analytic computations indicate that mental ability per se is a less important cause of early success than is the amount of education completed.... By far the strongest direct determinant of early labor market success among young men is the number of years of school completed. In addition, the amount of education is found to be more important for occupational status than for hourly earnings... (Kohen, op. cit., pp. 142-146 passim)

Clearly, Kohen's findings differ from the present study. One obvious difference is that there are some predictors that appear in only one of the two studies. The present study has measures of county wage levels and a respondent's geographical location. Kohen has a measure of health. Both studies have measures of educational and occupational attainment, but sample differences make the variables quite different. Kohen's measure of schooling has a larger variance because over one-half of his sample pursued their education beyond high school, whereas our present analysis is limited to those who did not go on to post-high school education. Similarly, the Duncan status of attainment measure has a higher mean and larger standard deviation in the Ohio State study because the spectrum of jobs represented in that sample is so much broader. Thus, Kohen's findings about the importance of years of schooling may not be in conflict with the present study at all; indeed, we may eventually duplicate his findings when we return to the YIT cohort in spring of 1974 -- five years beyond high school.

There is one area, however, where we see a distinct conflict in the data -- one which we doubt will change when we look at the

YIT cohort next spring. This concerns the relative importance of intelligence and family background in predicting status of attained job. Both studies report that SEL and intelligence are important predictors at the zero-order level. In fact, it is somewhat surprising how close the correlations are, given the restricted range

Correlations (P-M) with Duncan
Status of Attained Job
(Whites Only)

	YIT	Kohen
Family background	.21	.18
Intelligence	.21	.27
Dropout/Graduate	.06	--
Years of Schooling	--	.45

of educational attainment and family background in the YIT subsample analyzed here. In multivariate analysis utilizing both SEL and intelligence, we found that SEL can account for one-quarter of the explained variance in status of attained job independent of intelligence. To do this in a sample with a restricted range of education and SEL is evidence that both of these factors play an even bigger role than suggested in Kohen's study.

Why the differences? Perhaps measurement is a factor. The SEL and intelligence measures are operationalized somewhat differently in the two studies. Intelligence is operationalized in Kohen's study by converting to standard scores whatever intelligence test was available in a respondent's school record. This procedure, while much better than one which does not consider intelligence at all, is fraught with problems. Kohen acknowledges these in an appendix devoted to the procedures he used. YIT, on the other hand, used intelligence measures (GATB and Gates in the present report) which were administered to the entire sample under fairly uniform conditions -- group sessions of 20 to 30 respondents conducted by trained interviewers from the Survey Research Center. The method differences alone may account for some of the differences in the results of the two studies. For example, in the full YIT sample (the entire set of males in the high school Class of 1969, N=2213), family SEL and intelligence are correlated $r = .45$. In Kohen's sample the correlation is $r = .33$. This suggests that some differences in measurement may be crucial in the analytic outcome.

Another potential problem concerns missing data. For a variety of reasons Kohen was forced to eliminate 38 percent of those eligible for inclusion in his study (514 out of 1321). About one-quarter of those eliminated were not willing to sign the waiver form permitting the school to release mental ability test scores. Exactly how much bias this introduced into his sample is not known, but it is certainly plausible that many who were eliminated had low scores on their intelligence test and were from low SEL families. This is important because our investigations indicate that it is these very individuals who differ most from the average in unemployment, status of attained job, and wage level.

Potentially important policy issues may hinge on the relationship between family background and intelligence as determinants of the status of attained job. Both studies find that intelligence is an independent direct determinant of early labor market success. YIT finds that family SEL also has a unique effect independent of its impact on an individual's intelligence, while Kohen claims that family background has no unique contribution to occupational attainment after taking into account its contribution to intellectual development and years of schooling. The distinction is potentially an important one for policy-makers. Kohen interprets this overlapping variance (of SEL with educational attainment and intelligence) as support for equalizing educational opportunity at the secondary level and higher. This, he argues, should improve the occupational opportunities for young men who come from disadvantaged backgrounds. This conclusion comes from the following line of reasoning: if family background is important in the prediction of intelligence and years of schooling, but is unimportant in the prediction of job status, then the "socialization function of the family and its ability to finance continued education are far more important than the 'contacts' it may provide as determinants of a young man's early labor market success" (Kohen, p. 139). But that is not the only line of reasoning permitted by the data. Inasmuch as family background is a measure of ability to pay for continued education, his argument is sound. But the family also provides what Kohen calls a "socialization function," which we assume includes the notion that parents transmit to their offspring certain motives and values toward work and job attainment which cannot be taught in school. To the extent that these values <u>cause</u> a young man to seek out additional education (regardless of the cost), then family background serves a function that equal educational opportunity may not fulfill. Of course this argument becomes even stronger if the data from the present study are a more accurate representation of reality -- i.e., that family background accounts for variance in job attainment independent of intelligence and years of schooling.

Years of schooling is rather clearly defined, easily measured, and susceptible to influence by public policy. For all these reasons, it is tempting to assume that years of schooling is itself an important determinant of later outcomes such as job attainment. Our own analysis of the dropout/graduate variable, a somewhat restricted measure of years of schooling, showed that its influence was considerably reduced in the presence of measures of family background and intelligence. We argued then that the dropout measure was more accurately seen as a symptom of basic limitations than as itself a cause of differences that influence occupational attainment. Might not the same thing be true to some extent for the more comprehensive measure of years of schooling? We think so, and feel that additional research has to be focused squarely on this issue.

One other area where the two studies differ concerns the determinants of wage levels for young men. When wages are used as the dependent variable, Kohen finds that intelligence makes an important contribution, while YIT finds that its relationship to wages is very weak (see Table 5-5). In our multivariate analysis of wages using family background and county wage levels, family background continued to show some unique predictive power, albeit very small relative to county wage levels. It is quite possible that some of this difference results from the different characteristics of the samples. In our own study, intelligence may become a much more important predictor of wages when the sample includes those with advanced educational training. At the same time, method differences may be important as well. In our next data collection the YIT cohort will more nearly approximate Kohen's sample. Analysis of the new data should be helpful in deciding whether the differences are real or only methodological. Meanwhile, some reanalysis of the Kohen data using the YIT models and analytic strategy might be informative. In particular, it would be interesting to see how important intelligence is when measures of economic factors such as county wage levels are used.

CHAPTER 6

JOB SATISFACTION AMONG YOUNG WORKERS

In the last chapter the focus was on several objective measures of job attainment, including status and wages. Observers of the labor scene evaluate such attainment with implicit value criteria: high status and high wages are better than their opposites. But another criterion of job attainment is an individual's subjective response to his job situation -- his job satisfaction. The present chapter defines job satisfaction and then tries to discover those characteristics of the person and his job which are most important in determining the level of expressed satisfaction.

I. DEFINING JOB SATISFACTION

Job satisfaction was operationalized in this study in two different ways. The first was a single item shown in Table 6-1. As

TABLE 6-1

Distributions on Single-Item Job Satisfaction Measure

4IF3: "All things considered, how satisfied are you with your work experience on your present job? (SHOW R CARD F3)"

	N*	Percent
Very Satisfied	150	36
Quite	139	33
Somewhat	70	17
Not very	42	10
Not at All	18	4
Total (working full-time)	419	100%

* Ten respondents had missing data on this item.

can be seen from the distribution, over two-thirds of those working full-time considered themselves "quite" or "very" satisfied with their present work experience. Only four percent expressed extreme dissatisfaction.

The second way of operationalizing job satisfaction is a good deal more complex. Throughout the four years of this study a series of questions were asked which measured a concept called Person-Environment Fit (P-E Fit). The concept of fit refers to the relationship between a person's basic needs and the environmental supply of those needs (Super, 1963; French, 1962). The degree to which needs and supply match determines the goodness of fit. In each survey a respondent's major environment (school, work, military service) was first ascertained. Then a series of questions were posed which related to that environment. For respondents who were working, the interviewer read the following statement.

> One of the things we're interested in studying is the way a job fits in with the needs of young men your age. The next questions each have three parts: the first part asks about some need you might have; the second part asks about your job; the third part asks how well your job meets your need.

A sample question sequence appears below.

> The first questions are about being independent -- that is, having a lot of freedom to decide what you will do, and not having people watching over you and telling you what to do.
>
> A. Compared with others your age, how important is it for you to be independent? (1. Much more important than average.... 5. Much less important than average.)
>
> B. How much does your job give you a chance to be independent? (1. Very much... 5. Not at all)
>
> C. Now, how does the amount of independence you have in your job fit in with what you want -- is it just about right, or not enough, or too much? (1. Too much, compared with what I want... 5. Not enough, compared with what I want.)

The last question, asking how the supply fit with what the respondent wanted, is the fit measure for one dimension of need -- independence. The total set of needs that were asked about include the following:

1. Being independent
2. Achieving success
3. Spending time with friends
4. Avoiding doing things where you might fail
5. Self-improvement
6. Doing things you're already good at
7. Using your intelligence
8. Being a good reader

Not all of these needs may be important to an individual, but this is taken into account in the question stem: no matter how important or unimportant the need is, the respondent is asked how the supply fits in with what he wants. (The exact wording of all the items may be found in Appendix A, interview items J1 - J8.)

An overall measure of the goodness of person-environment fit was obtained in the following manner. First, the scale for the fit item was collapsed, so that "too much" and "not enough" received the same score. The highest score for goodness of fit, then, is

Goodness of fit	Raw Score	
1	5	Too much, compared with what I want
2	4	A little too much
3	3	Just about right
2	2	Not quite enough
1	1	Not enough, compared with what I want

"3," corresponding to "just about right." A score of "1" can indicate either that the person was not getting enough chance to do something, or that he was getting too much chance to do it. However, very few respondents had raw scores of four or five, so in practice a low goodness of fit score indicates an inadequate chance to fulfill needs.

The next step in creating an index of P-E Fit was to take a mean over all eight dimensions. The resultant measure correlates $\underline{r} = .57$ with the single-item measure of satisfaction discussed earlier. This size coefficient suggested that each measure was capturing a slightly different component of satisfaction. Accordingly, the measure of P-E Fit and the single-item measure of satisfaction were combined. The scores for each were standardized and a mean taken, with each component weighted equally.[1] The

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[1] The correlations of the components with the summary measure of Job Fit were these: $\underline{r}$ (satisfaction, single-item) = .90; $\underline{r}$ (P-E Fit) = .88.

resulting index was called Job Fit; the distribution is shown in Figure 6-1.

As seen before with the single-item measure, the distribution is skewed, reflecting the fact that, on the whole, these young men were reasonably satisfied with their work experience. (Approximately 20 percent of the labor force sample were excluded from these analyses because they were working less than 35 hours per week. This group might be much less satisfied with their experiences.)

It should be remembered that the group being examined consists of young males, recently out of high school, and working full-time. Three-quarters of them had been working for less than one year at their present job. In most cases the job to which they were responding was their first job. These facts are important to understanding the high level of satisfaction they express. Much of the recent literature on job satisfaction has pointed to the alienation of young workers. Yet the samples providing data for such conclusions typically include a broad age range, e.g., 18-24, and include females as well as males. The YIT males were just tasting their first full-time job. This meant money in their pockets and perhaps enough extra to purchase a car or other item denied them when they were living with their parents and depending on a weekly allowance. One can imagine as well a certain excitement accompanying the newfound freedom and independence of being a wage earner. Simply being on a job instead of attending school probably carries with it a sense of accomplishment at having made the transition into the adult world successfully. For such workers the warm glow of early success may be a more important component of job satisfaction than characteristics of the job itself.

II. CORRELATES OF SATISFACTION

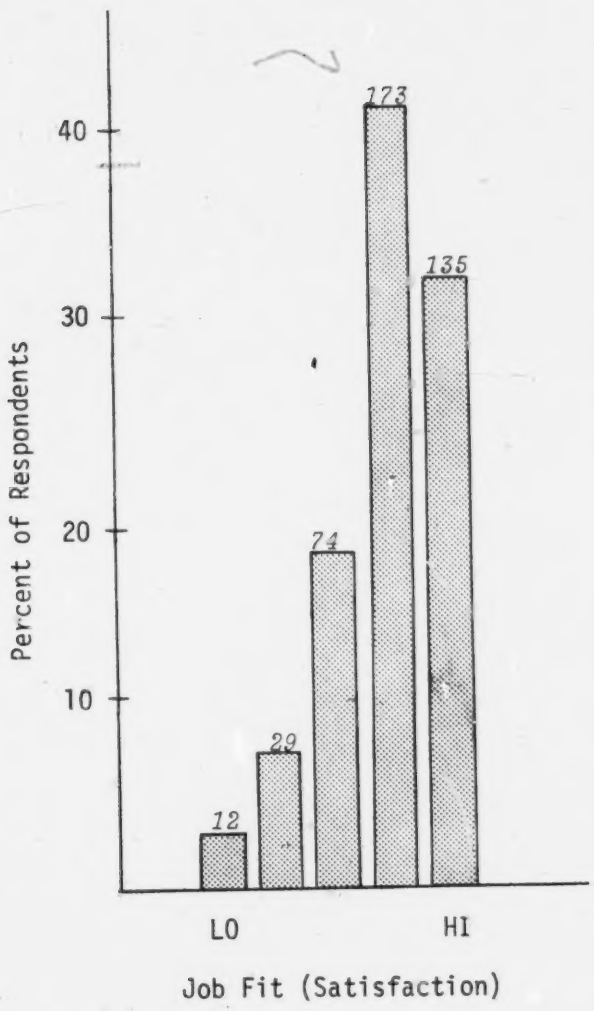
While the general level of satisfaction seems to be high, there is sufficient variation to lead us to inquire into the causes of different levels of expressed satisfaction. Three searches were made. The first for indicators of a general disposition to be satisfied. A second search was made for possible antecedents of job satisfaction in the individual's background and past experiences; and a third for correlates in the nature of the work itself.

PREDISPOSITION TO BE SATISFIED

In an analysis of the causes of job satisfaction it is tempting to look for correlates only among the characteristics of the job.

FIGURE 6-1

Distribution of Scores on Job Fit



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But a prior step is in order -- an exploration of the possibility that some of the variation is attributable to basic personality differences regardless of the conditions under which one works. Operationally this entails looking at patterns of satisfaction from an earlier point in time. In the present study, two measures meet this criterion. The first is Person-Environment Fit (P-E Fit) with school, measured in tenth and eleventh grade. This measure is identical to the eight-item index of P-E Fit with job described earlier, except that "school" was used in place of "job" as a stimulus. The data appear in Table 6-2. Job Fit shows a small but significant correlation with P-E Fit (school) measured two and three years earlier. Another measure of disposition to satisfaction is an index entitled happiness. Endorsements of six questionnaire items were combined to form this index. Five items were worded positively: I generally feel in good spirits; I am very satisfied with life; I find a good deal of happiness in life; I feel like smiling; and I feel happy. One item worded negatively said, I feel sad. Again, the correlations show a small but statistically significant relationship between job satisfaction and a general measure of life satisfaction several years earlier. These findings suggest that some people are predisposed by virtue of personality (or perhaps generally favorable circumstances) to respond positively or negatively to their environment. But the association is small enough to leave ample room for other factors to influence individual response to the job.

OCCUPATIONAL EXPECTATIONS

It seemed plausible that certain attitudes or expectations about occupational attainment might be related to satisfaction. To the extent that an attained job fulfills one's expectations, it ought to be more satisfying. One such measure of expectations is a young man's statement of his aspired occupation. This is easily converted to a Duncan status code. Since the job attained is coded on the same scale, a measure of expectation-fulfillment can be derived from the difference between aspired and attained occupation measured in Duncan units. The relationship to satisfaction is shown in Table 6-3. The correlations are negative, of course, indicating that the greater the discrepancy the lower the satisfaction. The strength of association is moderate, certainly strong enough to confirm the hypothesis.[2]

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[2] A good portion of the explained variance, but by no means all of it, can be attributed to status of the Time 4 job alone -- i.e., those in higher status jobs tend to be more satisfied regardless of their earlier aspirations.

TABLE 6-2

Job Satisfaction Related to
Earlier Satisfaction with School and Life

	Product-Moment Correlation	
General Satisfaction	Single Item	Job Fit
P-E Fit School, tenth grade	.12	.19
P-E Fit School, eleventh grade	.17	.27
Happiness, tenth grade	.16	.17
Happiness, eleventh grade	.19	.18
Happiness, twelfth grade	.15	.18

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NOTE: The average N underlying the above correlations is 400. Statistical significance ($p<.05$) for this N is r = .10. Taking into consideration the design effect reduces the N to 173 and significance requires r = .15.

TABLE 6-3

Job Satisfaction Related to Occupational Expectations

	Product-Moment Correlation	
	Single Item	Job Fit
Discrepancy: Time 1 (10th Grade) Aspired Occupation and Time 4 Attained Occupation	-.21 (315)	-.24 (313)
Discrepancy: Time 3 (12th Grade) Aspired Occupation and Time 4 Attained Occupation	-.21 (355)	-.29 (353)

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NOTE: The reduced N results from "undecided" responses to the aspired occupation question.

Additional insight into the dynamics of how expectations influence satisfaction come from some related analyses of family status, intelligence, and type of job attained. Family socio-economic level (SEL) and intelligence are not associated bivariately with satisfaction. For SEL the data are: $\underline{r}$ single-item = .01; $\underline{r}$ Job Fit = -.04. Intelligence (GATB test) shows a small non-significant negative relationship (-.09, -.11). While not important bivariately, these measures interact with job type to produce some interesting results. Recall from the previous chapter that an examination of the relationship of SEL and intelligence to attainment uncovered some deviations from the trend line for those from the highest SEL families and those with the highest measured intelligence. Unemployment was unexpectedly high for these groups and, for those who were employed full-time, average status and wage rates were slightly depressed. Further investigation led to the discovery that early in high school the young men in these categories had not intended to enter the labor force immediately after high school. Instead, they had planned to attend college and later secure employment in one of the high status jobs available to those with advanced degrees. We concluded that many of these youths did not want to enter the labor force at this time, but were forced to do so when their hopes for college were disappointed, perhaps because they failed to meet the admissions requirements. The data in Figure 6-2 provide further support for this hypothesis. The figure shows the mean level of satisfaction for nine different job categories. The shaded portion denotes a range on satisfaction of one standard deviation about the mean. Considering the entire working sample (dots connected by solid lines), there is a strong tendency toward the mean. Almost three-quarters of the workers (categories B, D, F, G) fall very close to the mean. Only one group is lower than one-half standard deviation in the dissatisfied direction -- these are the laborers. On the positive side, slightly higher than average satisfaction is displayed by those in professional/managerial jobs, sales jobs, and farming. The highest level of satisfaction is associated with the small group of apprentices.

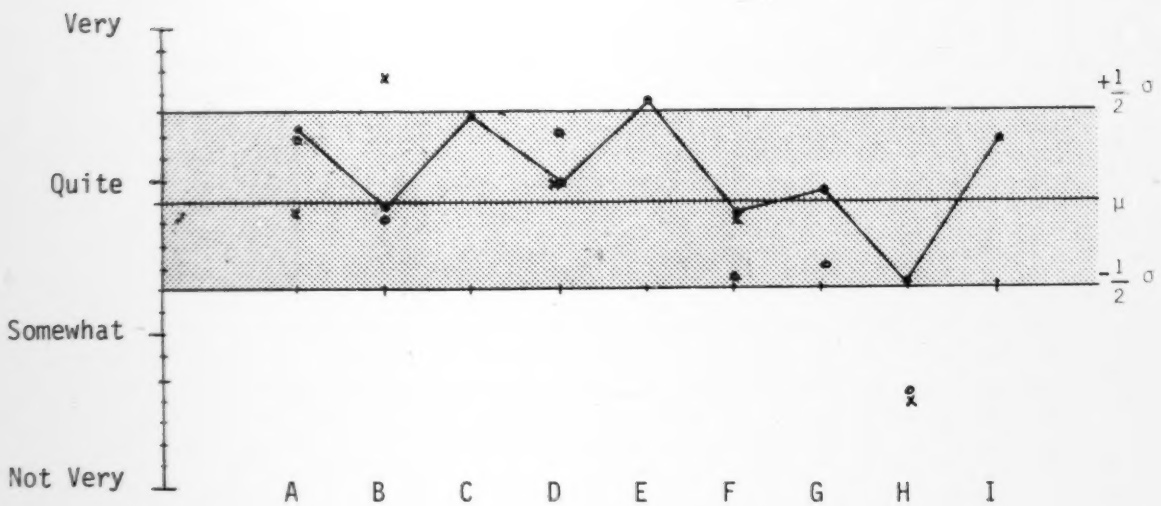
The data points for two subgroups of the sample present a contrasting picture. The most intelligent of the young men who are engaged in operative, service, and laborer jobs are much more dissatisfied than their less intelligent co-workers (small circles on Figure 6-2). A similar pattern holds for workers from high SEL families (small X's). These young men apparently see themselves as white collar misfits in blue collar jobs.

RATINGS OF JOB CHARACTERISTICS

For those employed full time, job type relates to satisfaction with an eta of .26. This level is almost statistically

FIGURE 6-2

Job Satisfaction by Type of Job



A	Prof, Tech, Mgr., Prop.	(23)
B	Clerical	(46)
C	Sales	(16)
D	Craftsman	(83)
E	Apprentice	(14)
F	Operatives	(144)
G	Service Workers	(24)
H	Laborers	(59)
I	Farmers	(14)

Criterion is single-item measure of satisfaction. Mean = 3.9, 1/2 S.D. = .57. 1: Not at all satisfied, 5: Very satisfied.

• = all respondents employed full-time, N=425, data point not shown for < 5 cases.
◦ = High scores on GATB, 21.01 - 44.00, N=91, data point not shown for < 5 cases.
x = High family socioeconomic level, N=43, data point not shown for < 5 cases.

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significant. (An eta of .20 is significant for an N of 400 when the sample is random; but for this clustered sample the more conservative criterion of .30 is appropriate.) Significance aside, the distribution is very interesting. The particular deviant job categories lead to the speculation that jobs which are characterized by opportunities for self-development, self-utilization, and individual responsibility are intrinsically the most satisfying. The concept of job type, however, is at best a crude approximation of the qualitative dimensions of a job. Much more appropriate are measures of the nature of the work engaged in, such as the amount of pay, challenge, autonomy, etc. The present study does not have objective measures of such characteristics, but it does have respondents' ratings of various job characteristics. These are described below.

Individual Explanations of Satisfaction. Immediately following the single-item satisfaction question was a probe which asked, "What kinds of things have led you to feel that way?" The answers provide some useful insights. It should be kept in mind, however, that answers to such a question are subject to distortion by the respondent. Few respondents have adequate knowledge of their own motivation, and many feel the need to say something to rationalize their satisfaction lest they appear to be undiscriminating.

The responses are shown in Table 6-4. Most comments fall into one of two large categories: content of the job (intrinsic aspects such as the variety and challenge of tasks), and personal benefits (extrinsic aspects such as pay and advancement). A much smaller third category involves characteristics of the supervisor. Within each of these categories we find substantial differences in positive or negative tone -- those who say they are satisfied with their jobs make almost entirely positive comments, while the opposite is true for those who are dissatisfied. But it is very interesting to note the distributions across the several broad content categories are very similar for the three levels of satisfaction shown in Table 6-4. In other words, it is not the case in these data that one broad dimension tends to be a source of dissatisfaction while another is primarily a basis of satisfaction.

Likes and Dislikes. A few questions later in the interview respondents were asked what they liked and disliked about their job. Their responses were quite diverse (these are shown in detail in Appendix D). Among the satisfied, about one-third mentioned liking the tasks involved in performing the job. Another 21 percent mentioned the social life associated with their job. Fifteen percent mentioned specific material benefits such as pay or chances for advancement. Interestingly, the dissatisfied group mentioned liking most of the same things.

TABLE 6-4

Reasons for Feeling Satisfied/Dissatisfied for Levels of Job Satisfaction

	Very & Somewhat Satisfied (N=283)	Neither Satisfied nor Dissatisfied (N=67)	Somewhat & Very Dissatisfied (N=58)
Supervisor/ Positive	6	0	0
Supervisor/ Negative	0	6	9
Job Content/ Positive	45	19	0
Job Content/ Negative	1	21	50
Personal Benefits/Positive	47	25	2
Personal Benefits/Negative	1	28	36
Other/Positive	1	0	0
Other/Negative	0	0	4
	101%	99%	101%

5516

NOTE: Percent totals may not equal exactly 100 due to rounding.

TABLE 6-4 (cont.)

Examples of Statements Indicating Why A
Person Felt Satisfied or Dissatisfied

Category	Examples
Supervisor/ Positive	Supervisor is good; directs my work well Supervisor is fair; judged by work, not who you are
Supervisor/ Negative	Supervisor unfair; "apple-polishing" goes on Don't get to work on my own; supervisor watches me every minute
Job Content/ Positive	Lots of variety of tasks in my job Work is hard, challenging (if respondent indicated dissatisfaction, this is considered a negative statement)
Job Content/ Negative	Don't like the work I do; dull, uninteresting work Don't learn enough on my job
Personal Benefits/Positive	Pay is good; pay not bad Like my co-workers; meeting nice people; work with nice people
Personal Benefits/Negative	No advancement opportunities; poor promotion opportunities Poor hours; don't like the hours
Other	Like it better than any other alternative Would rather be doing something else (school, travel, etc.)

5516

Responses were quite different to the question about things disliked about the job. One-third of the satisfied could think of nothing they disliked about the job. Seventeen percent identified job content issues and 11 percent inadequate material benefits. For the dissatisfied, the percent reacting to the content of the job was 38 percent, more than twice the percent of those who were satisfied. Those noting material benefits amounted to 17 percent, or 1-1/2 times the percent satisfied. At the conscious level, at least, job content appears to be the most salient dimension impacting on response to the job. This interpretation gains even more support if one adds in the percent who dislike their supervisors, the lack of freedom on the job, and those who state that they are incompatible with the job.

Ratings of Job Dimensions. The open-ended responses suggest a diversity of personal reasons for levels of satisfaction. But the data are somewhat limited. They come from open-ended questions, so not all respondents would have considered the same dimensions in the process of deciding how to respond to the questions. To explore the issue more systematically we had respondents describe a number of dimensions of their job using rating scales. These are described below (more detailed descriptions can be found in the Glossary). Each of these measures is then related to job satisfaction, and the resulting chart of correlations provides an indication of the relative importance of each of these characteristics to satisfaction level.

Job Payoff. A mean of three items which ask how true it is that the job is steady, pays well, and offers an opportunity for advancement.

Job Challenge. This measure is a difference score between means for two sets of measures, providing a balanced scale. The set of items with positive social desirability includes: the job provides a chance to learn new things, get ahead, and use skills I already have. The set of items with negative social desirability includes: the job does NOT require me to learn new things, take a lot of responsibility, or work too hard.

Job Meaningfulness. This concept refers to the intrinsic rewards provided by the job itself. The four ingredients ask how meaningful is the work, how interesting is the job, how often interest is high enough to do more than required, and how important the things being learned on the job are for later life.

Job Autonomy. The ten items in this index ask about the autonomy an individual has in determining how the job is carried out. Half of the items ask whether the individual schedules his own work, sets his own pace, etc. The remaining items ask whether someone else organizes or checks the work and sets deadlines.

Supervisor Warmth. This index captures some of the personal qualities of the supervisor; how friendly he is, whether he talks down to workers, loses his temper, listens to problems.

Supervisor Talk. This index characterizes the frequency of interaction between the worker and his supervisor.

All of the above dimensions were correlated with the two measures of job satisfaction. Table 6-5 shows the results. Meaningfulness shows the highest correlation with Job Fit, $r = .63$; Challenge and Payoff are close behind. (Incidentally, actual wages correlate only $r = .10$ with satisfaction.) While measurement issues keep us from comparing the relative strengths of each dimension too precisely, it does appear clear that both the extrinsic and intrinsic aspects of a job are important factors associated with job satisfaction.

These correlations are fairly large, and they are consistently in the directions which one would hypothesize in advance -- higher levels of payoff, challenge, meaningfulness, and autonomy are all associated with higher levels of job satisfaction. But the measures of job characteristics and satisfaction are all subjective ratings, and thus subject to question. Do ratings of autonomy or challenge really have anything to do with objective job characteristics, or do they simply reflect other ways of saying that one is satisfied with his job? Ideally, one would set out to answer such a question by comparing the subjective ratings with objective information about each job. Our present data do not include such objective measures of job characteristics, but they do permit a classification according to type of job; and that gives us some leverage in dealing with the question raised above.

It seems reasonable to suppose that there are some differences in challenge, autonomy, and perhaps the other dimensions when one contrasts the average "laborer" with the average individual in a sales or managerial position. To be sure, there are many kinds of laborer jobs and many kinds of managerial jobs; and some laborers might, in the eyes of an "objective" observer, experience more challenge or autonomy than some in managerial roles. But it still

TABLE 6-5

Ratings of Job Dimensions Correlated with Job Satisfaction

Job Dimension	P-M r with Job Fit*	P-M r with single-item job satisfaction*
1. Payoff	.48	.44
2. Challenge	.53	.45
3. Meaningfulness	.63	.56
4. Autonomy	.34	.29
5. Supervisory characteristics		
a. warmth	.21	.18
b. talk	.28	.25

5529

* The following 95 percent confidence intervals may be helpful in interpreting the correlations. CI(r=.63) = .57-.69; CI(r=.48) = .40-.55. Fisher's z-test was used for the calculations.

TABLE 6-6

Predicting to Ratings of Job Dimensions From Type of Job

Job Type predicted to:	Eta
1. Payoff	.29
2. Challenge	.39
3. Meaningfulness	.40
4. Autonomy	.36
5. Supervisory characteristics	
a. warmth	.28
b. talk	.29
6. Job Fit	.30

5530

Job Type is a 12-category predictor. An eta corresponding to a significant F (p<.05) is .22 for a simple random sample with N=400 and .33 for a clustered sample with a design effect of 2.3.

seems reasonable to suppose that there are, on the average, differences between such types of jobs. And if this supposition is correct, then we should expect to find that valid ratings of challenge, autonomy, and the like will show differences from one job type to another.

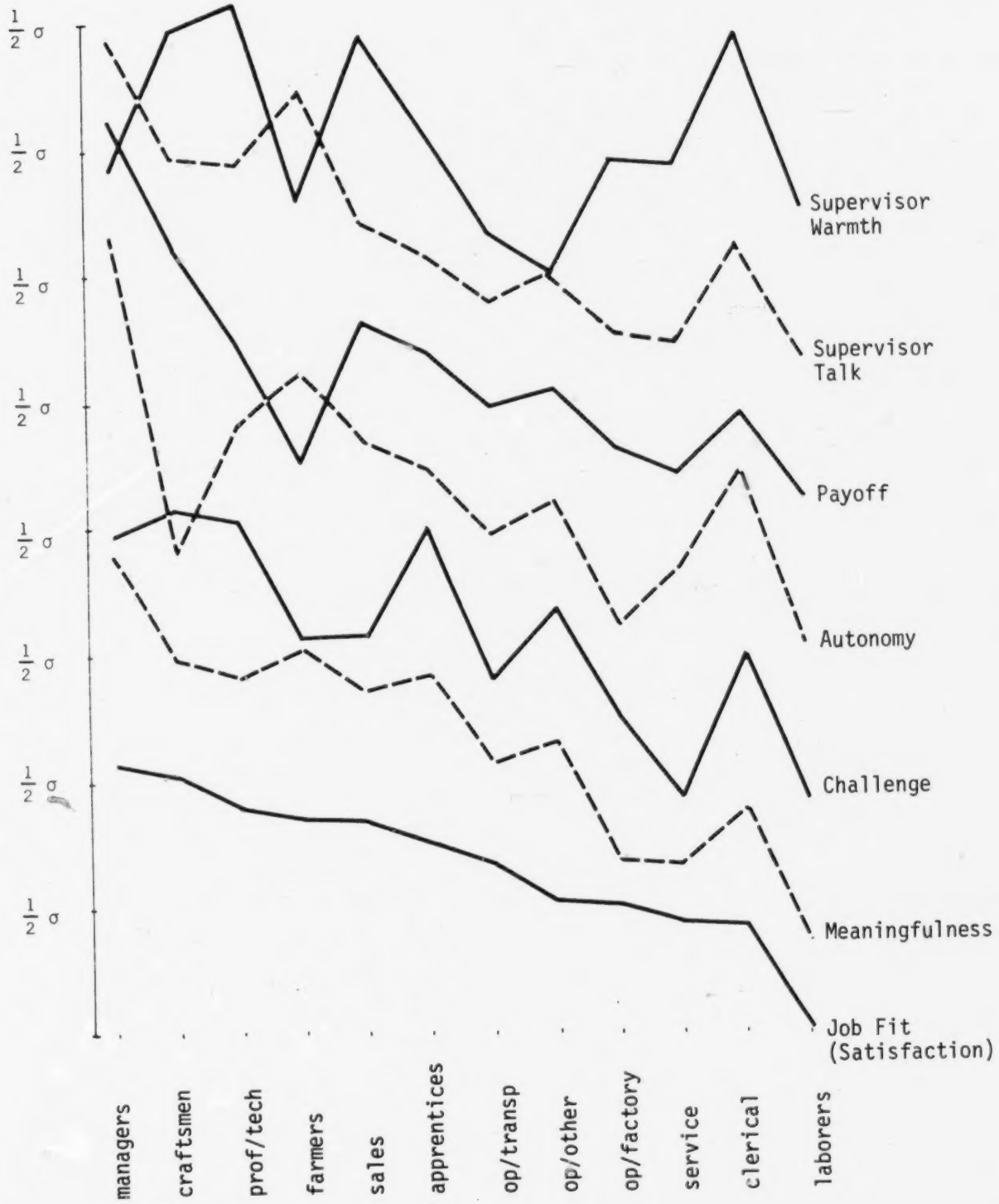
Table 6-6 presents the relevant data. When we classify our respondents according to job type in a one-way analysis of variance, the eta values for job characteristics range from .28 to .40. In other words, we can account for between eight and 16 percent of the variance in these job ratings simply by knowing job type. (Further, it seems reasonable to suppose that if our categorization of job type were more precise -- and our sample large enough to warrant the more detailed classification -- the proportion of explained variance might increase appreciably.)

The differences among job types are generally quite in line with our expectations. Managerial jobs are among the highest in rated satisfaction, meaningfulness, challenge, autonomy, and payoff, while laborer jobs average at the bottom of each of these scales. The mean ratings for these and other job types can be observed in Figure 6-3. The different job types have been arranged across the figure according to their satisfaction ratings -- jobs with the highest mean satisfaction scores are on the left, and those with lowest ratings are on the right. Note that the trend lines for most of the job characteristics follow the same sort of downward slope as is shown for satisfaction. The average ratings for meaningfulness smoothly parallel those for satisfaction. (Indeed, the correlation between <u>mean</u> satisfaction and <u>mean</u> meaningfulness across the 12 job types is .94). The others are not quite so smooth, but the association with satisfaction is still quite strong (correlations of <u>means</u> ranging from .72 to .83), except for the dimension of supervisory warmth (correlation of <u>means</u> = .53).

The results of the analyses outlined above give us some increased confidence in our subjective measures of job characteristics, for we have found them to be related meaningfully to broad job type. On the other hand, we must be clear as to what these relationships do and do not mean. There probably remains much "subjectivity" and "bias" in individuals' ratings of their job characteristics. Moreover, there is also a good deal of real variation in job characteristics <u>within</u> each of the job types, and the differences in such characteristics are likely to be linked to satisfaction at least some of the time. More extensive measures and samples than our present ones will be needed to do a thorough job of assessing the validity of ratings of job characteristics, and determining the extent to which such characteristics are

FIGURE 6-3

Ratings of Job Dimensions and Job Satisfaction by Job Type



linked to job type. But the present exercise suggests at the very least that there is more than "mere subjectivity" in such ratings. More importantly, these analyses show that job characteristics do make a difference in the satisfaction a young man derives from his work experience.

APPENDIX A

INTERVIEW AND QUESTIONNAIRE ITEMS RELATED TO JOB ATTITUDES AND JOB ATTAINMENT FROM THE YOUTH IN TRANSITION STUDY TIME 4

SECTION F -- R IS PRESENTLY EMPLOYED

F1. Do you presently work at more than one job?

( ) YES -- ASK THE FOLLOWING QUESTIONS ABOUT THE JOB THAT IS MOST IMPORTANT TO R; THAT WILL USUALLY BE THE JOB HE SPENDS THE MOST TIME ON

( ) NO

F2. What kind of work do you do? (PROBE IF NECESSARY: Tell me a little more about this job)

_____

_____

F2a. In what kind of business or industry is this job? _____

_____

F3. All things considered, how satisfied are you with your work experience on your present job? (SHOW R CARD F3)

( ) 1 VERY SATISFIED
( ) 2 QUITE SATISFIED
( ) 3 SOMEWHAT SATISFIED
( ) 4 NOT VERY SATISFIED
( ) 5 NOT AT ALL SATISFIED

F3a. What kinds of things have led you to feel that way?

_____

_____

_____

F4. About how many hours a week do you work on this job?

_____ HOURS PER WEEK

F5. Taking into account the amount of overtime you might average per week, how much are you earning on this job <u>per week</u> before taxes or other deductions are made by your employer?

$ _____ PER WEEK

F6. When did you enter this job? _____ (MONTH, YEAR)

F7. How did you find out about this job? _____

_____

_____

F8. We are interested in finding out what things young men do to try to find a job. Tell me how many of these things you did while job-hunting. (READ LIST ONE AT A TIME; CHECK EACH THING R SAYS HE DID)

( ) a. Checked with school employment service (or counselor)

( ) b. Checked with local or state public employment office or Youth Opportunity Center

( ) c. Checked with private employment agency

( ) d. Checked directly with employers

( ) e. Placed or answered newspaper ads

( ) f. Checked with friends or relatives

( ) g. Did you do other things? (SPECIFY) _____

_____

F9. How much security is there on your job? Do you think you can stay on this job as long as you like, or might you get laid off?

_____

_____

F10. What are the things you like about your job?

_____

_____

_____

F11. What are the things you dislike about your job?

_____

_____

_____

F12. Have you any idea how long you'll stay on this job?

( ) YES ( ) NO -- (TURN TO PAGE 21, F13)

↓

F12a. How long? _____ (NUMBER OF MONTHS)

SECTION J

( ) R IS CURRENTLY SERVING IN THE MILITARY FULL-TIME: SAY --

One of the things we're interested in studying is the way military service fits in with the needs of young men your age. The next questions each have three parts: the first part asks about some need you might have; the second part asks about your job in the military; and the third part asks how your job in the military meets your need. The questions about your job refer to your military work.

(INTERVIEWER: USE PERSON AND JOB QUESTIONS FOR EACH ITEM)

( ) R IS CURRENTLY WORKING AND WAS NOT PRIMARILY A STUDENT LAST TERM: SAY --

One of the things we're interested in studying is the way a job fits in with the needs of young men your age. The next questions each have three parts: the first part asks about some need you might have; the second part asks about your job; the third part asks how well your job meets your need.

(INTERVIEWER: USE PERSON AND JOB QUESTIONS FOR EACH ITEM)

( ) R SPENT LAST TERM IN SCHOOL, AND IS NOT PRESENTLY IN A "PERMANENT" JOB (PROBABLY BECAUSE HE IS GOING BACK TO SCHOOL IN THE FALL): SAY --

One of the things we're studying is the way school (or college) fits in with the needs of young men your age. The next questions each have three parts: the first part asks about some need you might have; the second part asks about your school; and the third part asks how well your school meets (met) your need.

(INTERVIEWER: USE PERSON AND SCHOOL QUESTIONS FOR EACH ITEM)

( ) R SPENT LAST TERM IN SCHOOL, BUT IS NOW IN A "PERMANENT" JOB, AND IS NOT PLANNING TO RETURN TO SCHOOL FULL-TIME IN THE FALL: SAY --

One of the things we're studying is the way schools and jobs fit in with the needs of young men your age. The next questions each have several parts: the first part asks about some need you might have; the second part asks about your school; the third part asks how well the school meets (met) your need. Then some of the same questions are asked about your job and how well the job meets your need.

(INTERVIEWER: USE ALL QUESTIONS FOR EACH ITEM)

( ) R IS CURRENTLY NOT WORKING AT ALL AND DID NOT SPEND LAST TERM IN SCHOOL: SAY --

The next questions ask about some needs that young men your age may have.

(INTERVIEWER: USE ONLY THE PERSON QUESTIONS FOR EACH ITEM. YOU MAY HAVE TO EXPLAIN WHY YOU'RE NOT USING THE BOTTOM PARTS OF THE CARD.

(SHOW R CARD J1-J3) In answering these questions, I'd like you to use the answers on this card; I'll show you how this works in just a moment.

J1. The first questions are about <u>being independent</u> -- that is, having a lot of freedom to decide what you will do; and not having people watching over you and telling you what to do.

PERSON

J1a. Compared with others your age, how important is it for you to be independent? (Pick your answer from Part A on the card.)

( ) 1 MUCH MORE IMPORTANT THAN AVERAGE
( ) 2 A LITTLE MORE IMPORTANT THAN AVERAGE
( ) 3 ABOUT AVERAGE IMPORTANCE
( ) 4 A LITTLE LESS IMPORTANT THAN AVERAGE
( ) 5 MUCH LESS IMPORTANT THAN AVERAGE

SCHOOL

J1b. How much has your school given you a chance to be independent? (Pick your answer from Part B.)

( ) 1 VERY MUCH
( ) 2 QUITE A BIT
( ) 3 SOME
( ) 4 A LITTLE
( ) 5 NOT AT ALL

J1c. Now, how has the amount of independence you've had in school fit in with what you want -- is it just about right, or not enough, or too much? (Pick your answer from Part C.)

( ) 1 TOO MUCH, COMPARED WITH WHAT I WANT
( ) 2 A LITTLE TOO MUCH
( ) 3 JUST ABOUT RIGHT
( ) 4 NOT QUITE ENOUGH
( ) 5 NOT ENOUGH, COMPARED WITH WHAT I WANT

JOB

J1d. How much does your job give you a chance to be independent? (Pick your answer from Part B.)

( ) 1 VERY MUCH
( ) 2 QUITE A BIT
( ) 3 SOME
( ) 4 A LITTLE
( ) 5 NOT AT ALL

J1e. Now, how does the amount of independence you have in your job fit in with what you want -- is it just about right, or not enough, or too much? (Pick your answer from Part C.)

( ) 1 TOO MUCH, COMPARED WITH WHAT I WANT
( ) 2 A LITTLE TOO MUCH
( ) 3 JUST ABOUT RIGHT
( ) 4 NOT QUITE ENOUGH
( ) 5 NOT ENOUGH, COMPARED WITH WHAT I WANT

QUESTIONS J2 - J8 follow the same format as J1. The different stems are listed below.

J2. The next questions are about achieving success -- doing things that are challenging; winning in competition with others; trying to reach difficult goals.

J3. The next questions are about spending time with friends -- being together and enjoying each other's company.

Now we have some sets of questions that are just like the ones we've been doing, except one more question is asked. We use another card for these, but it works just about the same way.

J4. People feel differently about doing things where they risk failing. Compared with others your age, how important is it for you to avoid doing things where you might fail?

(In addition to asking whether the job provides a chance to do things where he might fail, an item asked how much the job actually requires him to do things where he might fail.)

J5. The next questions are about self-improvement -- learning new things; doing better than you have been able to do in the past.

J6. The next questions are just a bit different. Instead of asking about improving yourself, these questions are about doing things you're already good at -- this means doing the things you have learned how to do well and enjoy doing; being able to use the skills and abilities that you already have.

J7. The next questions are about several abilities and how much you use them. We use another answer card for these questions, but it still works the same way. The first questions are about intelligence -- having a quick mind; catching on to things fast.

a. How intelligent do you think you are, compared with others your age?
b. Compared with others your age, how important is it to you to be able to use your intelligence?

J8. The next questions are about being a good reader -- reading quickly without making mistakes; reading difficult books.

Part A

These next questions about your "work" refer to the kind of work you do mostly. If you are holding a full-time (or nearly full-time) job, that is the "work" we want to know about. If you are mostly a student, we want to know about your student "work" -- not a part-time job or a summer job. If you are in military service, consider this your job.

(CHECK ONE BOX ON EACH LINE)

			Almost always true (1)	Often true (2)	Sometimes true (3)	Seldom true (4)	Never true (5)
(3:46)	146.	It is up to me to schedule my own work	☐	☐	☐	☐	☐
(3:47)	147.	I can do my work whenever I want, so long as I get it done	☐	☐	☐	☐	☐
(3:48)	148.	I feel like I am a slave to routine	☐	☐	☐	☐	☐
(3:49)	149.	When I work at something, I can set my own pace	☐	☐	☐	☐	☐
(3:50)	150.	I have a lot of influence over the nature of my work	☐	☐	☐	☐	☐
(3:51)	151.	It is up to me to decide how to do my work	☐	☐	☐	☐	☐
(3:52)	152.	My work is organized by others	☐	☐	☐	☐	☐
(3:53)	153.	My deadlines are set by others	☐	☐	☐	☐	☐
(3:54)	154.	My work is closely checked by others	☐	☐	☐	☐	☐
(3:55)	155.	I am told exactly how to do my work	☐	☐	☐	☐	☐

Part C

PART C

The next questions are about the kind of job you would like to have. Different people want different things from a job. Some of the things that might be important are listed below. Please read each of the things on the list, then check the box that tells how important this thing would be to you.

Don't just check *Very Important* for everything. Try to think what things really matter to you, and what things really aren't that important.

(CHECK ONE BOX ON EACH LINE)

		How important is this for you?			
		Very important (1)	Pretty important (2)	A little important (3)	Not important (4)
(5:16)	1. A job where there's no one to boss me on the work	☐	☐	☐	☐
(5:17)	2. A job that is steady, no chance of being laid off	☐	☐	☐	☐
(5:18)	3. A job where I can learn new things, learn new skills	☐	☐	☐	☐
(5:19)	4. A job where I don't have to work too hard	☐	☐	☐	☐
(5:20)	5. A clean job, where I don't get dirty	☐	☐	☐	☐
(5:21)	6. A job with good chances for getting ahead	☐	☐	☐	☐
(5:22)	7. A job where I don't have to take a lot of responsibility	☐	☐	☐	☐
(5:23)	8. A job that leaves me a lot of free time to do what I want to do	☐	☐	☐	☐
(5:24)	9. A job where the pay is good	☐	☐	☐	☐
(5:25)	10. A job that my friends think a lot of -- has class	☐	☐	☐	☐
(5:26)	11. A job that uses my skill and abilities -- lets me do the things I can do best	☐	☐	☐	☐
(5:27)	12. A job that has nice friendly people to work with	☐	☐	☐	☐
(5:28)	13. A job that doesn't make me learn a lot of new things	☐	☐	☐	☐

PART H.

(8:22) 1. Which of the following best describes your present situation?

- ☐ (1) Working on a job that is not just a "summer job"
- ☐ (2) Full-time in military service
- ☐ (3) Neither of the above -- PLEASE CHECK WITH THE INTERVIEWER TO SEE IF YOU SHOULD SKIP THIS SECTION

→ Here are some questions about your job and your supervisor(s). When answering these questions consider your supervisor the person who directs you on your work, the person who is your immediate boss on the job. (If you have more than one job, answer these questions for your most important job.) If you are in military service, consider your supervisor the person who would be most like your immediate boss on a civilian job.

(CHECK ONE BOX ON EACH LINE)

		Almost always (1)	Often (2)	Sometimes (3)	Seldom (4)	Never (5)
(8:23)	2. How often is your supervisor friendly and easy to approach?	☐	☐	☐	☐	☐
(8:24)	3. How often does your supervisor lose his temper? . . .	☐	☐	☐	☐	☐
(8:25)	4. How often can your supervisor get the best from people without nagging or threatening?.	☐	☐	☐	☐	☐
(8:26)	5. How often does your supervisor "talk down" to workers, and act as if they don't know anything?. . .	☐	☐	☐	☐	☐
(8:27)	6. How often is your supervisor willing to listen to problems and help find solutions?.	☐	☐	☐	☐	☐
(8:28)	7. How often does your supervisor encourage extra effort from workers?.	☐	☐	☐	☐	☐
(8:29)	8. How often does your supervisor ask people to work together on things in groups or as a team?.	☐	☐	☐	☐	☐
(8:30)	9. How often do you feel that the work you are assigned on your job is meaningful and important?.	☐	☐	☐	☐	☐

(8:31) 10. How often do you talk privately with your supervisor about work (even if it is just for a few minutes)?

- ☐ (1) Nearly every day
- ☐ (2) About once or twice a week
- ☐ (3) About once or twice a month
- ☐ (4) A few times a year
- ☐ (5) Never

(8:32) 11. How often do you have a private talk with your supervisor about other things than work?

- ☐ (1) Nearly every day
- ☐ (2) About once or twice a week
- ☐ (3) About once or twice a month
- ☐ (4) A few times a year
- ☐ (5) Never

(8:33) 12. When you talk privately with your supervisor, how often is it the supervisor's idea to have the talk?

- ☐ (1) It is always the supervisor's idea
- ☐ (2) It is usually the supervisor's idea
- ☐ (3) It is the supervisor's idea about half of the time
- ☐ (4) It is usually my idea
- ☐ (5) It is always my idea

(8:34) 13. Does your supervisor give you positive suggestions about your work, or just make negative criticisms?

- ☐ (1) Almost always just negative criticisms
- ☐ (2) Usually just negative criticisms
- ☐ (3) Sometimes positive suggestions, sometimes negative criticisms
- ☐ (4) Usually positive suggestions
- ☐ (5) Almost always positive suggestions

Part H

(8:35) 14. How often do you get a chance to work with a supervisor in planning what your work will be -- like what you will be doing, or how you should do it?

- ☐ (1) Almost always
- ☐ (2) Often
- ☐ (3) Sometimes
- ☐ (4) Seldom
- ☐ (5) Never

(8:36) 15. Would you like a chance to do more of this?

- ☐ (1) Yes
- ☐ (2) No

(8:37) 16. How interesting is your job to you?

- ☐ (1) Very exciting and stimulating
- ☐ (2) Quite interesting
- ☐ (3) Fairly interesting
- ☐ (4) Slightly dull
- ☐ (5) Very dull

(8:38) 17. How often are you interested enough to do more work than your job requires?

- ☐ (1) Most of the time
- ☐ (2) Often
- ☐ (3) Sometimes
- ☐ (4) Hardly ever
- ☐ (5) Never

(8:39) 18. How important do you think the things you are learning in your job are going to be for your later life?

- ☐ (1) Very important
- ☐ (2) Quite important
- ☐ (3) Fairly important
- ☐ (4) Slightly important
- ☐ (5) Not at all important

	How well do each of the following statements describe you and your job experiences?	Very true (1)	Somewhat true (2)	Not at all true (3)
(8:40)	19. Having a job like this makes me feel more like an adult	☐	☐	☐
(8:41)	20. My job gets in the way of other things I enjoy. . .	☐	☐	☐
(8:42)	21. What I have learned in high school helps me do better on my job.	☐	☐	☐
(8:43)	22. Having this job gives me higher status among my friends.	☐	☐	☐
(8:44)	23. I could do my present job just as well without any high school education	☐	☐	☐
(8:45)	24. My job gives me a good chance to learn new things and improve myself	☐	☐	☐

(8:46) 25. Did anyone in the high school you attended help you to get your present job?

- ☐ (1) No
- ☐ (2) Yes, I got a little help from people at school
- ☐ (3) Yes, I got a lot of help from people at school

(8:47) 26. Do you think you would have gotten this job if people at your high school had not helped you?

- ☐ (1) Yes, I'm sure I would have gotten it anyway
- ☐ (2) I probably would have gotten it anyway
- ☐ (3) I probably would not have gotten it
- ☐ (4) No, I'm sure I would not have gotten my job if the people at school had not helped me

Part H

In an earlier section, we asked you some questions about the kind of job you'd like to have. Here are some questions about your present job -- how true is each of the following statements for the job you have now?

(CHECK ONE BOX ON EACH LINE)

		How true is this for your present job?			
		Very true (1)	Pretty true (2)	A little true (3)	Not at all true (4)
(8:48)	27. There's no one to boss me on the work	☐	☐	☐	☐
(8:49)	28. It is steady, no chance of being laid off	☐	☐	☐	☐
(8:50)	29. I can learn new things, learn new skills.	☐	☐	☐	☐
(8:51)	30. I don't have to work too hard	☐	☐	☐	☐
(8:52)	31. It is a clean job, where I don't get dirty.	☐	☐	☐	☐
(8:53)	32. It has good chances for getting ahead	☐	☐	☐	☐
(8:54)	33. I don't have to take a lot of responsibility.	☐	☐	☐	☐
(8:55)	34. It leaves me a lot of free time to do what I want to do . .	☐	☐	☐	☐
(8:56)	35. The pay is good	☐	☐	☐	☐
(8:57)	36. It is a job that my friends think a lot of -- has class . .	☐	☐	☐	☐
(8:58)	37. It uses my skill and abilities -- lets me do the things I can do best	☐	☐	☐	☐
(8:59)	38. There are nice friendly people to work with	☐	☐	☐	☐
(8:60)	39. It doesn't make me learn a lot of new things.	☐	☐	☐	☐

NOW TURN TO PAGE 51 AND READ THE INSTRUCTIONS

APPENDIX B

OCCUPATION RECODES (DUNCAN, SIEGEL, FOLK)

For analytic purposes, it was useful to convert the job attained into a code which had an underlying ordinal scale denoting a range of quality, status, or prestige. Three different recodings were tried, two of them status codings. One is the well-established Duncan scale of socioeconomic status based primarily on average income and education of those working in the occupation in 1950 (Reiss, 1961). This will be referred to as simply the Duncan scale. It takes on values from 01 to 99, with the higher scores implying higher socioeconomic status for the job. Table B-1 gives examples of occupations for various levels of Duncan status.

The second scale was developed by Paul Siegel, and is a measure of the prestige of an occupation in the eyes of the American public. There are no explicit connections to income or education. The scale was developed using a number of surveys conducted during the 1960s. Briefly, the procedure involved asking respondents to put a card with an occupational title on it "in the box at the top of the ladder if you think that occupation has the highest possible social standing. Put it in the box at the bottom of the ladder if you think it has the lowest possible social standing. If it belongs somewhere in between, just put it in the box that matches the social standing of the occupation." (Siegel, 1971, p. 11-13) This procedure and some standardizing of the scores across surveys resulted in a scale with values from 1 to 99. Again, the highest values correspond to the occupations with the highest prestige.

A third, and somewhat different, classification of occupations was developed in 1972 by Hugh Folk at the University of Illinois. It is a rating of the "degree of careerness" of an occupation as measured by the "gross survival rate" (GSR). The GSR for a specific occupation is the ratio of employment in the occupation for a specific age-color-sex group in 1960 to employment in the occupation for the same cohort in 1950. More specifically, the GSR for 15-19 year old members of a given occupation is the number of 25-29 year olds in that occupation in 1960 divided by the number of 15-19 year old members in 1950. Thus, a high score (greater than one) suggests a career-type job, since such a number describes an occupation filled primarily by older people. On the other hand, a score of less than one (0.0 to 0.99) suggests that the job is filled mostly by young people and can

TABLE B-1

Examples of Occupations in Selected Duncan Categories
for Those Employed Full-Time At Time 4

Duncan Range	Frequency	Occupations*	
2 - 5	12	laborer, sawmill (6)	laborer, railroad and railway express (2)
6 - 9	47	oper., furniture (3) janitor (4) laborer, blast furnace steel works (4) laborer, construction (9)	oper.,footwear (3) farm laborer (7) laborer, meat products (4) warehousemen (3)
10 - 13	33	oper., primary iron and steel industry (3) gardener (4) kitchen worker (4)	hospital, institutional attendant (4) laborer, wholesale, retail trade (7)
14 - 15	42	farmers (owner) (3) cook (6)	truck and tractor driver (19) laborer, electric machine, equipment and supplies (3)
16 - 17	40	painter, construction and maintenance (3) oper., paperboard containers, boxes (3)	oper., fabricated structure metal products (3) assembler (12)
18 - 19	47	carpenters (6) automobile mechanic, repairman (12) painter, excluding construction and maintenance (4)	attendant, auto service and parking (9) oper., pulp, paper and paperboard mills (3) oper., construction (non-manufacturing) (9)

TABLE B-1 (cont.)

Duncan Range	Frequency	Occupations	
20 - 23	34	shipping and receiving clerk (13) oper., transportation excluding railroad (3)	cabinet makers (3)
24 - 27	25	mechanic or repairman, not elsewhere classified (7) oper., electric machines (9)	welder, flame cutters (4)
28 - 35	35	machinist (3) metalworking trades (3) deliverymen and routemen (4)	plumbers and pipefitters (3) meatcutters, excluding slaughter and packing house (6)
36 - 39	21	manager, proprieter, eating and drinking places (3)	sales, retail trade (13)
40 - 47	43	oper., office machines (4) electrician (5)	clerical and kindred workers (20) machinists and toolmakers (5)
48 - 51	26	surveyors (3) tool and die makers and setters (3)	linemen, servicemen, telegraph, telephone and power (14)
52	21	testing technician (4)	
	3	not classified	
	429	TOTAL (employed >34 hours per week)	

* Specific occupations were noted where there were more than two respondents in the same occupation. The number in the job are noted in parentheses.

oper. = operative

be thought of as a youth job. An example of a youth job is "usher in a movie house"; its score is 0.04 for white males.

Table B-2 shows the rating of five different occupations using each of these recoding schemes. Note under the Folk recodes that there are different scores for whites and non-whites (blacks, for the most part). The much higher score for non-white clerical and sales workers, for example, indicates that these kinds of jobs are much more rare for young blacks than for young whites. In assigning a Folk score to a respondent, his race was noted first; then the code for his occupation assigned from the appropriate table (white/non-white).

The reason for developing these measures of attainment was to use them as dependent variables in a series of analyses which look for antecedents of attainment among a host of predictors including intelligence, family background, school performance, and job attitudes. A large amount of staff time was spent acquiring the Siegel and Folk codes and adding the appropriate codes to each respondent's file. Both of these conversions seemed in theory to provide the type of criterion that was needed. The Siegel prestige code seemed promising because it was constructed from data that were much more recent than that used to build the Duncan scale. The Folk code -- "degree of careerness" of a job -- had strong conceptual appeal. If a youth secures a job held by very few adults, then he hasn't done as well in the job market as a young man who gains entry into an occupation that is heavily populated with those much older than himself. Despite their apparent attractiveness, these scales did little for us empirically. Only the Duncan showed an orderly relationship with any of the predictors we used. Some of the relevant data are displayed in Table B-3.

We were unable to discover why the Siegel code does not work; for the Folk code, two possibilities exist. One, the Folk recode table provides GSR indices for 104 occupations; for the remainder, average scores are provided for 10 major Census classifications of occupation. It may well be that this scale does not distinguish sufficiently within entry jobs such as those which a youth sample would enter. For example, 53 out of 413 respondents who were in craftsman type jobs had to be given the same mean score for the entire craftsman category, because their specific occupation did not have a unique GSR score. A second problem with the Folk code concerns its mathematical properties. "Youth jobs" can be thought of as all those occupations where the GSR index is a number between zero and one, while "adult jobs" have an index score between one and infinity (with a practical limit of 25). The resulting distribution violates most of the assumptions underlying any of the statistical methods used by the authors. If these limitations in the Folk code could be remedied, we continue to think that it would be a good criterion for job attainment in samples of young people.

TABLE B-2

Examples of Occupational Codings

Occupation	Census Bureau Code	Duncan Status Code (scale 1-99)	Siegel Status Code (scale 1-99)	Folk "Degree of Careerness" (scale 0-1, 1-40) White Male 15-19	Folk "Degree of Careerness" (scale 0-1, 1-40) Nonwhite Male 15-19
Professional draftsman	074	67	56.1	19.02	41.07
Clerical and Sales Worker shipping and receiving clerk	343	22	29.2	2.11	9.34
Skilled Workers carpenter	Q	19	39.9	4.73	3.58
Unskilled operative in manufacturing	W(296)	21	30.8	2.51	3.34
Laborer garage laborer	963	08	16.3	0.90	2.57

TABLE B-3

Job Attainment and Satisfaction Related to Selected Characteristics of The Respondent, His Family, and His Community (Product-Moment Correlation)*

Variable	SIEGEL T4 JOB	DUNCAN T4 JOB	FOLK T4 JOB	FOLKLOG T4 JOB	4IF5 EARN/WK	4IF3 JOB SAT
URBANICITY	.0902 (428)	.2085 (427)	.0600 (413)	.1027 (413)	.0857 (423)	.0265 (425)
AGE	.0159 (422)	.0410 (421)	-.0568 (408)	-.0565 (408)	-.0159 (417)	-.0146 (419)
CHURCH ATTENDANCE 1	-.0403 (391)	-.0634 (390)	-.1258 (377)	-.0877 (377)	-.0729 (386)	[illegible] (388)
SERIOUSNESS OF DELINQ 1	.0165 (408)	.0834 (407)	-.0106 (393)	-.0068 (393)	.1181 (404)	.1213 (406)
SERIOUSNESS OF DELINQ 4	.0461 (426)	.0232 (425)	.0668 (411)	.0652 (411)	.0224 (421)	.0111 (423)
FREQ OF DELINQ 1	.0779 (408)	.1198 (407)	.0150 (393)	.0253 (393)	.1365 (404)	.0754 (406)
FREQ OF DELINQ 4	.0314 (426)	.0035 (425)	.0203 (411)	.0420 (411)	.0242 (421)	.0360 (423)
DROPOUT=1; GRADUATE=2	-.0038 (425)	.1008 (427)	.0111 (413)	-.0305 (413)	-.1072 (423)	.0267 (425)
HELD BACK A GRADE? 1Y, 5N	.0403 (428)	.0709 (427)	-.0340 (413)	.0355 (413)	.0396 (423)	-.0158 (425)
SCHOOL GRADES 1	.1783 (427)	.1709 (426)	.0800 (412)	.0776 (412)	-.0384 (422)	.0570 (424)
SCHOOL GRADES 2	.1725 (402)	.2981 (401)	.1592 (388)	.1414 (388)	.0274 (397)	-.0122 (399)
SCHOOL GRADES 3	.1418 (353)	.0825 (352)	.1237 (340)	.0765 (340)	-.0513 (347)	-.0564 (350)
QUICK TEST OF INTELL.	.1396 (428)	.1306 (427)	.0247 (413)	-.0199 (413)	.0541 (423)	.0744 (425)
GATB-J TEST OF INTELL.	.1182 (428)	.2282 (427)	.0030 (413)	-.0527 (413)	.0508 (423)	.0440 (425)
GATES READING TEST	.1071 (428)	.1922 (427)	.0107 (413)	-.0218 (413)	.1226 (423)	.0822 (425)
SOCIO-ECONOMIC LEVEL	.1434 (414)	.2164 (413)	.0888 (400)	.0355 (400)	.0978 (409)	.0034 (411)

*NOTE: For N=400 $r_{.05}$=.10. Design effect reduces the effective N to 174, for which $r_{.05}$=.15. (See Chapter 5.)

**1=Very satisfied, 5=Not at all satisfied. (See Chapter 6.)

COUNTY: MKT FOR UNSK LAB	-.0468 (427)	-.0564 (426)	-.0349 (412)	-.0459 (412)	-.0481 (422)	-.0461 (424)
COUNTY: WAGES FOR UNSK LAB	-.0252 (427)	-.0070 (426)	-.0118 (412)	-.0343 (412)	.1688 (422)	-.0152 (424)
COUNTY: UNEM-PLOYMENT RATE	-.0571 (427)	-.0808 (426)	-.0515 (412)	-.0751 (412)	-.0713 (422)	.0499 (424)
IDEAL JOB: IM-PORT. OF PAY 1	-.1061 (420)	-.1629 (419)	-.0646 (405)	-.0496 (405)	.0091 (415)	.0487 (417)
IDEAL JOB: IM-PORT. OF PAY 2	.0406 (422)	-.0022 (421)	.0046 (407)	.0066 (407)	-.0085 (417)	.0608 (419)
IDEAL JOB: IM-PORT. OF PAY 3	.0324 (420)	-.0959 (419)	.0135 (405)	-.0137 (405)	-.0384 (415)	.0468 (417)
IDEAL JOB: IM-PORT. OF PAY 4	-.0454 (423)	-.1154 (422)	-.0576 (408)	-.0939 (408)	-.0360 (418)	-.0019 (420)
IDEAL JOB: IM-PORT. OF CHALL. 1	.0376 (416)	.1219 (415)	.0988 (401)	.0428 (401)	.0604 (411)	.0216 (413)
IDEAL JOB: IM-PORT. OF CHALL. 2	.1340 (412)	.1733 (411)	.0719 (398)	.0855 (398)	.0729 (407)	.0167 (409)
IDEAL JOB: IM-PORT. OF CHALL. 3	.0676 (405)	.1072 (404)	.0399 (390)	-.0045 (390)	.0561 (400)	.0015 (402)
IDEAL JOB: IM-PORT. OF CHALL. 4	.1471 (410)	.1508 (409)	.0775 (396)	.0833 (396)	.0582 (405)	-.0202 (407)
4IF5 EARNINGS T4 JOB	.0990 (423)	.0728 (423)	.0543 (409)	.1205 (409)	1.0000 (423)	.1054 (423)
SIEGEL RATING OF T4 JOB	1.0000 (428)	.7230 (427)	.6123 (413)	.6358 (413)	.0990 (423)	-.1917 (425)
DUNCAN RATING OF T4 JOB	.7230 (427)	1.0000 (427)	.5420 (413)	.4836 (413)	.0728 (423)	-.1544 (425)
FOLK RATING OF T4 JOB	.6129 (413)	.5420 (413)	1.0000 (413)	.8187 (413)	.0543 (409)	-.1067 (411)
FLKLOG RATING OF T4 JOB	.6358 (413)	.4836 (413)	.8187 (413)	1.0000 (413)	.1205 (409)	-.0991 (411)
SIEGEL RATING OF FATHER OCC	-.0216 (396)	.0367 (395)	.0495 (383)	-.0225 (383)	-.0107 (391)	.0351 (393)
FOLK RATING OF FATHER OCC	.0897 (366)	.1644 (365)	.1486 (354)	.0854 (354)	.0478 (361)	.0807 (363)
FOLK LOG RAT OF FATHER OCC	.0970 (366)	.1656 (365)	.1245 (354)	.0858 (354)	.0549 (361)	.0185 (363)
SIEGEL RATING OF ASP OCC 1	.1124 (330)	.1320 (329)	.0532 (317)	.0458 (317)	.0460 (326)	.0793 (328)

FOLK LOG RAT. OF ASP OCC 1	.0347 (309)	.1962 (308)	.0288 (298)	.0666 (298)	.0529 (306)	.1417 (309)
SIEGEL RATING OF ASP OCC 3	.0926 (364)	.1016 (363)	.0196 (354)	-.0516 (354)	-.0386 (361)	.1041 (362)
DUNCAN RATING OF ASP OCC 3	.0931 (357)	.1897 (356)	.0157 (347)	-.0325 (347)	-.0491 (354)	.1065 (355)
FOLK RATING OF ASP OCC 3	.0607 (349)	.0911 (348)	.0019 (339)	-.0233 (339)	-.0925 (346)	.1313 (347)
FOLK LOG RAT. OF ASP OCC 3	.0635 (349)	.0968 (348)	.0107 (339)	.0044 (339)	-.0596 (346)	.1165 (347)
SIEGEL RATING OF ASP OCC 4	.1493 (383)	.1410 (382)	.0949 (371)	.0617 (371)	-.0842 (378)	.1264 (380)
FOLK RATING OF ASP OCC 4	.0461 (364)	.1587 (363)	.1855 (359)	.1018 (359)	-.1233 (359)	.0539 (361)
FOLK LOG RAT. OF ASP OCC 4	.1225 (364)	.1547 (363)	.2197 (359)	.1346 (359)	-.0345 (359)	.0401 (361)
SELF ESTEEM 1	.0519 (426)	.1101 (425)	.0139 (411)	.1042 (411)	.0598 (421)	-.0753 (423)
SELF ESTEEM 4	.1017 (423)	.1871 (422)	.0625 (408)	.0892 (408)	.0004 (418)	-.1772 (420)
FLEXIBILITY 1	-.0884 (420)	-.0057 (419)	-.0407 (407)	-.0951 (407)	-.0611 (415)	.1051 (417)
FLEXIBILITY 4	-.0091 (419)	-.0151 (418)	-.0516 (405)	-.0960 (405)	.0356 (414)	.1627 (416)
TOT NEED SELF-DEVELOPMENT 1	.0529 (426)	.1062 (425)	.0635 (411)	.0423 (411)	.0732 (421)	.0089 (423)
TOT NEED SELF-DEVELOPMENT 4	.1573 (420)	.1970 (419)	.1392 (405)	.1580 (405)	.0679 (415)	.0186 (417)
TOT NEED SELF-UTILIZATION 1	-.0063 (426)	.0715 (425)	-.0327 (411)	-.0422 (411)	.0305 (421)	-.0349 (423)
TOT NEED SELF-UTILIZATION 4	.0884 (422)	.1073 (421)	.0374 (407)	.0666 (407)	.0591 (417)	.0565 (419)
P-E FIT DIRECTION 4	-.2197 (424)	-.1648 (423)	-.1303 (409)	-.1120 (409)	-.0317 (420)	.5856 (423)
P-E FIT GOODNESS 4	.1865 (424)	.1248 (423)	.1275 (409)	.1116 (409)	.0353 (420)	-.5692 (423)

VOC MATURITY 3	.0874 (427)	.1173 (426)	.0538 (413)	.0452 (413)	.0580 (422)	-.1930 (424)
COUNSELING FOR CAREER 3	.0531 (275)	-.0120 (274)	-.0046 (267)	-.0015 (267)	.0747 (270)	-.0293 (272)
4QH25: COUNS. HELP TO GET JOB	.0930 (402)	.1041 (401)	-.0463 (388)	-.0158 (388)	-.0505 (398)	.0347 (401)
4QH26: COUNS. HELP TO GET JOB	.0445 (380)	.0176 (379)	-.0740 (366)	-.0139 (366)	-.0011 (376)	-.0245 (379)
	SLT4J8	DVCNT4JR	FOLK,T4	FLKLOG4J	4IF5 LAP	4IF3*SAT

APPENDIX C

SAMPLING AND STATISTICS

As reported in Bachman, et al., (1967, pp. 21-24, 123-129), the sample for this study was selected in three stages. Stage one consisted of the Survey Research Center's national sample of counties and metropolitan areas selected from each of 88 strata. Stage two involved selecting one school from each such county or metropolitan area. (In one area several attempts were unsuccessful in locating a school willing to participate; therefore, it was necessary to omit this area and proceed with 87 schools.) Finally, stage three consisted of randomly selecting about 25 boys from each school.[1]

Given this type of clustered and stratified sample design, it is not appropriate to apply the standard, simple random sampling formulas to obtain estimates of sampling errors. The use of these formulas will almost always understate the actual sampling errors.

One measure of this understatement is the design effect (DEFF). For each sample estimate, the design effect is the square of the ratio of actual standard error to the expected standard error of the estimate from a simple random sample of the same size.

$$\text{DEFF (sample estimate)} = \left[\frac{\text{actual standard error of the estimate}}{\text{expected standard error of the estimate if the sample were simple random of the same size.}}\right]^2$$

For most of the *simple means* in this monograph, our estimates suggest that design effects will be under 3.

We recommend that an assumed value of DEFF = 2.8 be used in computing standard errors for the proportions (p) presented in this report. Estimate s.e. (p) by

$$(1) \qquad \text{s.e.}(p) = \sqrt{\frac{\text{DEFF}\,p(1-p)}{N}} = 1.7\sqrt{\frac{p(1-p)}{N}}$$

---

[1] This appendix was written by Martin Frankel, Sampling Section, Survey Research Center. We are grateful to Leslie Kish and Irene Hess for developing the sampling procedure used in this study.

Although the clustered nature of the data collection (sampling) introduces correlation between observations, we feel that the sampling error of a difference between two proportions p_1 and p_2, based on subclass sizes of N_1 and N_2 respectively, may be conservatively estimated as

$$(2) \quad s.e.(p_1-p_2) = \sqrt{DEFF \left[\frac{p_1(1-p_1)}{N_1} + \frac{p_2(1-p_2)}{N_2}\right]} = 1.5\sqrt{\frac{p_1(1-p_1)}{N_1} + \frac{p_2(1-p_2)}{N_2}}$$

Most of the proportions reported herein concern rates of unemployment. The overall rate among the 539 respondents in the labor force was .12. The following table presents the confidence intervals for differences in proportions (around .12) for various sizes of subgroups.

n_1	n_2	s.e.	Confidence Interval 1-tail	Confidence Interval 2-tail
25	500	.101	±.164	±.197
50	475	.073	.119	.143
75	450	.060	.100	.120
100	425	.054	.089	.107
150	375	.047	.077	.093
200	325	.044	.072	.086
250	275	.042	.070	.084
300	225	.044	.071	.085
350	175	.045	.074	.089
400	125	.050	.082	.099
450	75	.062	.100	.120
500	25	.101	.164	.197

Even when design effects for *simple means* are rather large, there exists a good deal of evidence to indicate that design effects for more complex statistics (e.g., regression and MCA coefficients, correlation coefficients, MCA Etas and Betas) are significantly lower (Kish and Frankel, 1970; Frankel, 1971). An appropriate

estimate of the design effect for the present study is around 2.3. Chapter 5 (analysis methods section) discusses the impact of this design effect on the significance of etas and F-statistics presented in this report.

APPENDIX D

SUPPLEMENTARY TABLES

TABLE 5-4X

Distribution of Jobs for SEL

SEL	Freq	JOB CATEGORY Prof/ Mgr	Cler	Sales	Craftsman (Incl app)	Oper/ mfg	Oper/ Transp	Oper/ Other	Srvc*	Laborer	Farmer
1 Low	*38* 100%	0.0	7.9	2.6	7.9	28.9	13.2	13.2	0.0	23.7	2.6
2	*82* 100%	1.2	7.3	2.4	21.9	25.6	4.9	7.3	8.5	15.9	4.9
3	*149* 100%	5.4	10.7	5.4	23.5	21.5	5.4	6.7	3.4	12.8	5.4
4	*100* 100%	9.0	11.0	3.0	26.0	17.0	7.0	8.0	8.0	10.0	0.0
5 High	*45* 100%	11.0	13.3	4.4	22.2	2.2	8.8	6.6	13.3	15.5	2.2
Totals	*414* 100%	*23* 5.5%	*46* 10.1%	*16* 3.9%	*97* 22.2%	*84* 19.8%	*28* 6.8%	*33* 7.7%	*25* 5.8%	*59* 14.0%	*14* 3.4%

5535,1

* includes government protection service workers (N=2)

Note: Italic numbers are frequencies; bold-face entries are percents.

TABLE 6-4X(a)

Examples of "Things I Like/Dislike About My Job"

Like Job Content	I'm learning things; getting educated; discovering something new Feeling of accomplishment, achievement, progress
Dislike Job Content	Work is routine, boring, too easy; no challenge Not enough variety of activity
Like Supervisors	Supervisors are good, capable; make things interesting Supervisors interested in us, the workers
Dislike Supervisors	Poor supervisors; don't like way work is taught Supervisors unfair; don't treat workers right
Job As Preparation for Later Life	Trains you for later job, career, occupation Job is important, useful; has intrinsic value
Like Job Social Life	Meeting new people; working with them Being with friends; like being with the co-workers
Dislike Job Social Life and Co-workers	Dislike cliques, select groups; discrimination Two-faced people, gossips, double-crossers, liars
Like Employer Authority and Worker Freedom	Not too many regulations, not too strict; I can do what I want Lot of worker responsibility
Dislike Employer Authority and Worker Freedom	Too many regulations; personally dislike too much authority No worker responsibility; not enough voice in affairs
Prefer Job to Other Alternatives	Avoids monotony; better than staying home Better or easier than going to school
Incompatible with Job	Dislike getting up in the morning Being cooped up all day; having to stay indoors
Like Material Benefits	Like the pay; like earning money; having money Job security
Dislike Material Benefits	Not high paying enough; bad wages No chance for advancement; little chance for promotion
Other Likes	Like the scheduling; good hours Food - lunches, coffee breaks, cafeteria
Other Dislikes	Physical facilities Transportation

TABLE 6-4X(b)

"Things I Like About My Job"*
For Levels of Job Satisfaction

Things I Like	Very/Somewhat Sat (286)	Neither Sat nor Dissat (70)	Somewhat/Very Dissat (60)
Job Content	36	37	25
Supervisors	3	1	8
Job as Preparation for Later Life	1	4	0
Job Social Life	21	18	22
Employer Authority and Worker Freedom	6	4	3
Prefer Job to Other Alternatives	0	1	0
Material Benefits	15	11	18
Nothing	0	3	10
Other reasons (including "Everything")	17	21	13
TOTAL	100%	100%	99%

5516

NOTE: Percent totals may not equal exactly 100 due to rounding.
See Table 6-4X(a) for examples of each category.

TABLE 6-4X(c)

"Things I Dislike About My Job" for
Levels of Job Satisfaction

Things I Dislike	Very/Somewhat Sat (284)	Neither Sat nor Dissat (69)	Somewhat/Very Dissat (59)
Job Content	17	32	38
Supervisors	5	9	9
Co-workers and Social Life	3	6	5
Employer Authority and Worker Freedom	1	1	5
Incompatible With Job	4	6	5
Material Benefits	11	16	17
Nothing	31	9	0
Other reasons (including "Everything")	27	21	21
TOTAL	99%	100%	100%

5516

NOTE: Percent totals may not equal exactly 100 due to rounding.
See Table 6-4X(a) for examples of each category.

GLOSSARY

ACADEMIC ACHIEVEMENT VALUE

An index of the value a respondent places on academic achievement. The items asked whether it is a "good" or "bad" thing to demonstrate behaviors indicative of academic achievement. The items are: studying constantly in order to become a well-educated person; working hard to achieve academic honors; striving to get the top grade-point average in the group; studying hard to get good grades in school. Scale: 1 = low (very bad thing to do); 6 = high (very good thing to do).

AGE

Respondent's age was coded from his birthdate. The scale is a two-digit number from 00 to 99. 00 = born before January 1949; 01 = born in January 1949; 02 = born in February 1949; etc.

ASP OCC -- ASPIRED OCCUPATION

Respondent's choice of a future occupation. "In the long run, what sort of work would you like to do:" For analytical purpose, this choice was always recoded to the appropriate Duncan status code.

AVERAGE GRADE -- AVERAGE GRADE IN SCHOOL

(See School Grades)

AVERAGE HOURLY EARNINGS

This information was not ascertained directly; it had to be calculated using wages per week (F5), hours per week (F4), Number of jobs held (F1), and type of job held (F2). The basic formula is: wages per week divided by hours per week. Two adjustments were made (1) farmers and self-employed were eliminated from calculations (2) for those who worked more than 40 hours per week at one job, their hours over 40 were first multiplied by 1.5 to approximate an overtime rate.

CHURCH ATTENDANCE

Used as a proxy for certain Protestant ethic values. Scale: 1 = once a wk or more; 2 = once or twice a month; 3 = a few times a year; 4 = never.

COUNSELING FOR CAREER (3QH46)

How much time was spent discussing your career or job choice: 1 = no time; 2 = less than 1/2 hour; 3 = about 1/2 hour; 4 = about 1 hour; 5 = about 1 1/2 hours; 6 = about 2 hours; 7 = about 3 hours; 8 = 4 or more hours.

COUNSELING HELP TO GET JOB (4QH25)

Did anyone in the high school you attended help you to get your present job? 1 = no; 2 = yes, I got a little help from people at school; 3 = yes, I got a lot of help from people at at school.

COUNSELING HELP TO GET JOB (4QH26)

Do you think you would have gotten this job if people at your high school had not helped you? 1 = Yes, I'm sure I would have gotten it anyway; 2 = I probably would have gotten it anyway; 3 = I probably would not have gotten it; 4 = no, I'm sure I would not have gotten my job if the people at school had not helped me.

COUNTY: MKT FOR UNSK. LAB

County: market for unskilled labor. Refers to county unemployment data obtained from state unemplt security commissions for specific counties. (See Chapter 5). This measure refers to the scale response to the question, "What is the market for unskilled labor in your county?" Scale: 1 = many more jobs than applicants; 2 = more jobs than applicants; 3 = most people are able to find jobs; 4 = a number of unskilled workers are unable to find jobs; 5 = many unskilled workers are unable to find jobs.

COUNTY: UNEMPLOYMENT RATE

Refers to data obtained from state unemployment security commissions for specific counties. (See Chapter 5). "What is the unemployment rate in your area (county)?" Scale: 1 = less than 2%; 2 = 2-3.9%; 3 = 4.0-5.9%; 4 = 6.0 - 10.0%.

COUNTY: WAGES FOR UNSKILLED LABOR

Obtained from state unemployment security commissions for specific counties. (See Chapter 5). "What is the typical wage that an unskilled male worker might receive?" Scale: 1 = less than $1.50; 2 = $1.50-1.99; 3 = $2.00-2.49; 4 = $2.50-2.99.

DROPOUT

See Educational Attainment

DUNCAN OCCUPATIONAL STATUS

A socio-economic status (S.E.S.) rating of occupations developed by O. D. Duncan. It is based on prestige ratings for the job titles in the 1947 NORC prestige study and data on income and education for the occupations in the 1950 Census. (See Reiss, 1961, cc.6-7 and App B). Scale: 01 = low; 99 = high status.

EDUCATIONAL ATTAINMENT

Dropout: Those who interrupted their high school education for more than a few weeks. As of 1970, approximately 20 percent of this group had returned to school and received a diploma.

Graduate: Those who graduated from high school in 1969, but did not continue their education (as of mid-1970).

College: High school graduates who continued their formal education. This group includes those who attended any formal institution of advanced training, ranging from a university to a technical/vocational school.

EARNINGS ON JOB AT TIME 4

Earnings in dollars per week. See Item F5 in Appendix A.

FATHER OCC - Father's Occupation

Occupation recoded to Duncan status score.

FLEXIBILITY

An index of items taken from the California Personality Inventory (see Bachman, 1967 for list of items). Respondents were asked to mark true or false on a questionnaire to such items as: "I often wish people would be more definite about things; For most questions there is just one right answer, once a person is able to get all the facts; I like a place for everything and everything in its place; I always see to it that my work is carefully planned and organized." Scale: 1 = not flexible; 2 = flexible.

FLKLOG RATING - Folklog Rating

Since the Folk transformation of occupation was skewed, a log base 10 transformation was done for each of the occupation variables (Time 4 job, father's occupation, T1 aspired job, T3 aspired job, T4 aspired job).

FOLK RATING

A 4-digit code indicating "degree of carerness" of an occupation as measured by gross survival rate (GSR). See Appendix B.
Codes: 0-1 GSR - teenage intensive employment; not a typical career job.

1-40+ GSR - "adult" or "career" job; more 25-29 year olds than 15-19 year olds in these occupations.

FREQUENCY OF DELINQ 1 & 4 - Frequency of delinquent behavior at Times 1 & 4

Refers to number and frequency of various delinquent acts such as: "run away from home; hurt someone badly enough to need bandages or a doctor; drunk beer or liquor without parents' permission; hit your mother." (See Bachman, 1970 for complete list of items). Scale: 1 = 5 or more times; 2 = 3 or 4 times; 3 = twice; 4 = once; 5 = never.

GATB-J TEST OF INTELLIGENCE

Score on part J (vocabulary) of the General Aptitude Test Battery. Score is number of items answered correctly out of 60. Taken at Time 1 only. (See Bachman, et al, 1967, p. 68-69; Bachman, 1970, p. 47) Maximum score for YIT sample was 44.

GATES READING TEST

Gates Test of reading comprehension taken at Time 1. Score is number correct. Perfect score is 43. (See Bachman et al, 1967, p. 67, and Bachman, 1970, p. 47).

HAPPINESS

Six questionnaire items were combined to form a very simple index of happiness. Five of the items were positive: I generally feel in good spirits; I am very satisfied with life; I find a good deal of happiness in life; I feel like smiling; I feel happy. There was one negative item: I feel sad. (See Bachman, 1970, p. 132). Response scale: almost always true, to never true. Index scale: 1.0 - 5.0, 5.0 = almost always happy.

HELD BACK A GRADE? 1Y, 5N

Have you ever been held back a grade in school? Scale: 1 = yes, 5 = no.

JOB AUTONOMY

This index is constructed from 10 items which ask about the amount of autonomy the individual has in determining how the job is carried out. The item set is shown below. Items 146-147, 149-151 ask whether the individual can schedule his own work, set his own pace, etc. The remaining items ask whether someone else organizes or checks the work and sets deadlines. For an individual to be consistent, he would have to choose opposite ends of the scale to answer items in the two different sets. This was done purposely to counter response set.

> These next questions about your "work" refer to the kind of work you do mostly. If you are holding a full-time (or nearly full-time) job, that is the "work" we want to know about. If you are mostly a student, we want to know about your student "work" --

not a part-time job or a summer job. If you are in military service, consider this your job.

(CHECK ONE BOX ON EACH LINE)

146(R) It is up to me to schedule my own work

147(R) I can do my work whenever I want, so long as I get it done

148 I feel like I am a slave to routine

149(R) When I work at something, I can set my own pace

150(R) I have a lot of influence over the nature of my work

151(R) It is up to me to decide how to do my work

152 My work is organized by others

153 My deadlines are set by others

154 My work is closely checked by others

155 I am told exactly how to do my work

Response Scale: 1 = Almost always true; 5 = Never True (See Appendix A)

Formula: Reverse the items marked "R"; take a mean across the ten items.

Scale: 1.0 - 5.0, 5.0 = individual exercises very high control over the way his work is done, and thus is very autonomous.

JOB CHALLENGE

This index measures an intrinsic benefit of the present job as perceived by the respondent. In each data collection respondents were asked to describe their ideal job using 13 dimensions described in Chapter 3. In the most recent data collection (Time 4) the 13 dimensions were presented twice, but with different instructions the second time. The second time they were asked to indicate how true each dimension was of their present job. The set of questions is shown in Appendix A, Questionnaire Part H, items 27-39. From these items two indexes were constructed which parallel the two indexes of job attitudes described in Chapter 3: the amount

of payoff and challenge perceived to exist in the job attained. Job Challenge is a difference score between the means for two sets of measures.

Descriptions of job, positive social desirability: Items 29, 32, 37; the job provides a chance to learn new things, get ahead, and use skills I already have.

Description of job, negative social desirability: Items 39, 33, 30; the job does not require me to learn new things, take a lot of responsibility, or work too hard.

Part of the rationale for taking the difference between means of the two sets of items is to provide a balanced scale to counteract the effects of response bias. The resulting index of Job Challenge had a range of 1.0 - 7.0. The scores were reversed so that 7.0 describes a very challenging job.

JOB MEANINGFULNESS

This concept refers to the intrinsic rewards provided by the job itself. It is operationalized by the following items:

4QH9 How often do you feel that the work you are assigned on your job is meaningful and important?
1-5, Almost always/often/sometimes/seldom/never

4QH16 How interesting is your job to you?
1-5, Very exciting and stimulating/quite interesting/fairly interesting/slightly dull/very dull

4QH17 How often are you interested enough to do more work than your job requires?
1-5, Most of the time/often/sometimes/hardly ever/never

4QH18 How important do you think the things you are learning in your job are going to be for your later life?
1-5, Very important/quite important/fairly important/slightly important/not at all important

Formula: Item scores all reversed. Mean of four items.
Scale: 1.0 - 5.0, 5.0 = job is very meaningful to me.

JOB PAYOFF

This index measures the extrinsic job benefits of the present job as perceived by the respondent. In each data collection respondents were asked to describe their ideal job using 13 dimensions described in Chapter 3. In the most recent data collection (Time 4) the 13 dimensions were presented to respondents twice, but with different instructions the second time. The second time they were asked to indicate how true each dimension was of their present job. The set of questions is shown in Appendix A, Questionnaire Part H, items 27-39. From these items two indexes were constructed which parallel the two indexes of job attitudes described in Chapter 3: the amount of payoff and challenge perceived to exist in the job attained. Job Payoff consists of a mean of items 28, 32, and 35 -- how true is it that your job pays well, has chances for advancement, and is steady. The resulting index had a range of 1.0 - 4.0. The scores were all reversed so that a score of 4.0 indicates that the job was high on extrinsic rewards.

NEED SELF-DEVELOPMENT 1, 4 - Total need for self-development Times 1 & 4

An index derived from respondents' self-ratings to 15 questionnaire items (See Bachman, 1970, p. 111, 114) designed to measure the need for self-development, such as: "When I learn something new, I like to set a goal for myself and try to reach it; I look for opportunities to better myself; I would be unhappy in a job where I didn't grow and develop; if I had to lower my goals because I just couldn't make it, that would really hurt." (See Bachman et al, 1967 for complete list of items).

Index scale: 1.00 = low need for self-development.
5.00 = high need for self-development.

NEED SELF-UTILIZATION 1, 4 - Total Need for self-utilization at Times 1 & 4

Similar questions to those comprising need for self-development were asked concerning use of one's existing skills and abilities. An 8-item measure of need for self-utilization asks questions such as: I wish I had more chance to use some of my skills; I'd like to bring my usual performance in line with the best I've ever done; It upsets me when I get worse at something I was once good at; I am afraid that if I don't keep in practice I will lose my skills. (See Bachman et al, 1967)

Index scale: 1 = low need for self-utilization
5 = high need for self-utilization

P-E FIT DIRECTION 4 - Person-environment fit: direction Time 4

This is a measure of how satisfied the respondent is with himself and his environment. Questions were asked about the respondent's needs and how well his environment (job, school, or other) fit his needs to be independent, improve himself, use his skills,and how much chance he had to spend time with friends, achieve success, avoid failure, use his intelligence and read. (See Bachman et al, 1967, p. 62, 109-111.) The P-E fit direction measure is an index of rating scales for each of the above dimensions, "How does this (the opportunity or requirement for ..... fit in with what you want?" (See Chapter 6, Job Fit.)

Index scale: 1.00 = too much; 5.00 = not enough

P-E FIT GOODNESS 4 - Person-environment fit; goodness - Time 4

Index collapses scale for P-E Fit Direction as follows:

Scale:	1.	Poor fit	too much not enough
	2.	Fair fit	a little too much not quite enough
	3.	Good fit	just about right

POSITIVE SCHOOL ATTITUDES

An index containing items which stress the intrinsic value of education, for example, "Education has a high value because knowing a lot is important to me; I believe an education will help me to be a mature adult." (See Bachman, 1970, p. 107 for a complete list of items.)

1 = low (education has little value)
4 = high (education has high value)

QUICK TEST OF INTELLIGENCE

This is a test of intelligence taken at Time 1, in which the respondent chose from a group of pictures one which best defined a word. Score was a point for each word correctly identified; highest possible = 150. Authors are Ammons and Ammons; it is discussed in detail in Bachman, 1970, pp 47-62.

REGION - Geographical region of the United States

Codes:

1. West (Montana, Idaho, Wyo, Colo, New Mex, Arizona, Utah, Nevada, Wash, Ore, Calif, Alaska, Hawaii).

2. North Central (Ohio, Inda, Ill, Mich, Wisc, Minn, Iowa, Mo, N Dak, S Dak, Neb, Kansas).

3. Northeast (Maine, N Hamp, Ver, Mass, Rh Island, Conn, New York, New Jersey, Penn).

4. South (Dela, Md, DC, Va, W Va, N Car, S Car, Geo, Fla, Kan, Tenn, Ala, Miss, Ark, La, Okla, Tex).

SCHOOL GRADES

The average grade in school during the preceeding school year. Scale: 10 = E or F failure; 22, 25, 28: D- to D+; 32, 35, 38: C- to C+; 42, 45, 48: B- to B+; 52, 55, 58: A- to A+.

SELF-ESTEEM 1, 4 - Self-esteem Time 1 and Time 4

An index combining six items from the Rosenberg scale and four from the Cobb scale. The questions were asked in a questionnaire at Times 1 and 4; the respondent rated himself on such questions as: "I feel that I'm a person of worth, at least on an equal plane with others; I am able to do things as well as most other people; I feel that I can't do anything right; I feel that my life is not very useful." (See Bachman, 1970, p. 124). Scale: 1.00 = low self-esteem; 5.00 = high self-esteem.

SERIOUSNESS OF DELINQ. 1 & 4 - Seriousness of delinquency at Times 1 & 4

Based on pilot studies and delinquency data, 10 of 26 delinquent acts were selected as "serious." This index refers to the frequency of these more serious delinquent acts admitted to on a confidential questionnaire administered at Times 1 and 4. These items include "set fire to someone else's property on purpose; taken something not belonging to you worth under $50; ... worth over $50; used a knife or gun or some other thing (like a club) to get something from a person." (See Bachman, 1970, pp. 162-3 for a complete list of items.) Scale: 1 = 5 or more times; 2 = 3 or 4 times; 3 = twice; 4 = once; 5 = never.

SIEGEL RATING

A 3-digit code of prestige rating of occupation. (See Siegel, 1971; this report, Appendix B.)

SOCIOECONOMIC LEVEL (SEL)

A summary index consisting of six equally weighted components: a) father's occupational status; b) father's educational level; c) mother's educational level; d) number of rooms per person in home; e) number of books in home; f) checklist of other possessions in the home (See Bachman, 1960, Ch 2 and Appendix B for detailed description.) These factors relate to the quality of home environment (but do not rule out factors of genetic endowment). Scale: 1 = low; 8 = high.

SUPERVISOR TALK

This index characterizes the amount of interaction that occurs between the worker and his supervisor. The ingredients are shown below.

H10(R) How often do you talk privately with your supervisor about work (even if it is just for a few minutes)? 1-5, nearly every day/about once or twice a week/ about once or twice a month/a few times a year/never.

H11(R) How often do you have a private talk with your supervisor about other things than work? 1-5, same scale as H10.

H14(R) How often do you get a chance to work with a supervisor in planning what your work will be -- like what you will be doing, or how you should do it? 1-5, almost always/often/sometimes/seldom/never.

Formula: Mean of items.
Scale: 1.0 - 5.0, 5.0 = frequent talking and interaction with supervisor.

SUPERVISOR WARMTH

This index captures some of the personal qualities of the supervisor; how friendly he is, whether he talks down to workers, loses his temper, or listens to problems. The set of items and the formula for the index is shown below.

H2(R) How often is your supervisor friendly and easy to approach?

H3 How often does your supervisor lose his temper?

H4(R) How often can your supervisor get the best from people without nagging or threatening?

H5 How often does your supervisor "talk down" to workers, and act as if they don't know anything?

H6(R) How often is your supervisor willing to listen to problems and help find solutions?

Response scale: 1-5, almost always/often/sometimes/seldom/never

Formula: Reverse items marked "R"; take a mean of all items.

Scale: 1.0 - 5.0, 5.0 = supervisor very warm and friendly.

TIME 1, 2, 3, 4

Denotes the data collection. Time 1 = fall, 1966 (early tenth grade); Time 2 = spring, 1968 (late eleventh grade); Time 3 = spring, 1969 (late twelfth grade); Time 4 = spring, 1970 (one year beyond normal graduation).

UNEMPLOYMENT

Not employed and not primarily in school or in military service in the spring of 1970 (one year after normal graduation for the Class of 1969). A series of questions were used to define respondent's major environmental status during the period of approximately February through May of 1970; employed and unemployed are two categories of environmental status. The employed category includes those working part- or full-time during this period as well as those temporarily laid off. A few respondents who might otherwise have been defined as being in the labor force were classified as military since they had enlisted shortly before the interview.

URBANICITY - Rating of respondent's place of residence

Scale: 1 = rural; 2 = small town less than 15,000; 3 = town of 15,000-50,000; 4 = res. or indus. suburb; 5 = city of 50,000-300,000; 6 = more than 300,000 (large city).

VOC. MATURITY 3 - Vocational maturity at Time 3

This measure is related to an individual's occupational choice. It indicates the extent to which a person (1) has made a choice, (2) is certain about his choice, (3) is certain it is a good chice, and (4) expects it to be a satisfying pursuit for him. The index is an attempt to operationalize Donald Super's concept of vocational maturity at the "Exploratory Stage" of vocational development. (See Johnston & Bachman, 1972, p. 53f; this report, Chapter 5.) Scale: 1 = vocationally immature, no occupational plans; 2 = has occupational plans, but not committed to them; ... 5 = vocationally mature, has occupational plans and is very committed to them.

WAGES

See Average Hourly Earnings.

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